Outcome of Percutaneous Intrapericardial Fibrin-Glue Injection Therapy for Left Ventricular Free Wall Rupture Secondary to Acute Myocardial Infarction.

Authors: Terashima M., Fujiwara S., Yaginuma G.-y., Takizawa K., Kaneko U., Meguro T.

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Abstract:

Left ventricular free wall rupture (LVFWR) is a fetal complication of acute myocardial infarction. This study was conducted to test the feasibility of percutaneous intrapericardial fibrin-glue injection therapy (PIFIT) for LVFWR after acute myocardial infarction and to assess its clinical outcome. From January 2000 to December 2004, LVFWR was confirmed by echocardiography in 22 patients. Thirteen patients showing abrupt hemodynamic collapse failed to recover from resuscitation maneuvers and died <2 hours after LVFWR. The remaining 9 patients (5 women, mean age 73 +/- 10 years) underwent PIFIT. Pericardiocentesis was performed from the subxiphoid process, and a 6Fr pigtail catheter was introduced into the pericardial space. After bloody fluid was drained from the catheter, the fibrin glue was injected into the pericardial space. There were no complications relating to pericardiocentesis and PIFIT. One patient underwent surgical repair on the day of PIFIT because of uncontrollable bleeding from pericardial drainage. In-hospital death as a result of rerupture occurred in 2 patients on days 4 and 7 after PIFIT. Echocardiography during follow-up revealed no evidence of pseudoaneurysm or left ventricular restriction. On follow-up at a median of 4.0 years (interquartile range 3.1 to 4.8), 1 noncardiac death occurred at 3.3 months. The other 5 patients were free of cardiovascular events and in New York Heart Association functional class I. In conclusion, PIFIT is a simple, effective, and less invasive technique for the management of LVFWR and thus can be an alternative to surgical repair for LVFWR after acute myocardial infarction.