Ventricular Septal Perforation after Acute Myocardial Infarction with Severe Inflammation: Three Case Reports

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Abstract

Ventricular septal perforation (VSP) is one of the severe mechanical complications associated with acute myocardial infarction (AMI). Although it is rare, VSP has a high mortality rate. VSP is characterized by biventricular volume overload due to left-to-right shunt. Combined with cardiac dysfunction due to AMI, it rapidly leads to heart failure.

This report presents three AMI patients with VSP who were treated at National Kyushu Medical Center. Urgent cardiac catheterization was performed for definite diagnosis, followed by emergency surgery, but two patients died.

In General, advanced age, female sex, initial onset, and diabetes were risk factors for VSP, while the risk factors for postoperative death were shock, advanced age, catecholamine use, low cardiac output, and percutaneous cardiopulmonary support. The one of the fatal case for VSP had many of these risk factors, as well as high levels of inflammatory parameters.

Early diagnosis is important for management of the mechanical complications of AMI. In patients with high levels of inflammatory parameters, it should be remembered that the risk of VSP is elevated.

Key words: Acute myocardial infarction, Ventricular septal perforation, Inflammation, Cardiac catheterization, Mechanical complication