

# **Incidence, Management, and Clinical Outcomes of Procedure-Related Coronary Artery Perforation: Analysis of 13,888 Coronary Angioplasty Procedures.**

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摘要

## **Abstract**

Background: Coronary artery perforation is a rare but life-threatening complication of percutaneous coronary intervention. We report our experience of incidence, management, and clinical outcomes of procedure-related coronary artery perforation in 13,888 consecutive patients.

Methods and Results: 13,888 patients underwent PCI for coronary artery disease from October 1992 to December 2006. During this period, 21 (0.15%) patients developed coronary artery perforation during PCI. Four patients with Ellis type I coronary artery perforation were treated successfully, including conservative treatment in 2 and device therapy in 2. Out of eight patients with Ellis type II coronary artery perforation, 2 patients received conservative treatment, 5 received device therapy and 1 received surgical ligation. One patient receiving device therapy had late cardiac tamponade and she expired due to aspiration pneumonia resulting from emergent endotracheal intubation.

Among the seven patients with Ellis type III coronary artery perforation, 5 received device therapy and 2 received emergent surgical repairs. Additionally, four of them needed emergent pericardiocentesis for immediate cardiac tamponade. One of the 2 patients with Ellis type IV coronary artery perforation was treated with balloon inflation, but he expired due to concomitant pneumonia. The other patient received surgical repair.

Conclusion: Management of coronary artery perforation can be tailored according to the classification of coronary

artery perforation and the hemodynamic status. Most patients can be treated successfully with non-surgical therapies.

However, surgical intervention should be provided promptly if non-surgical therapies fail. Furthermore, late cardiac

tamponade might occur even in less advanced types of coronary artery perforation..