DANGEROUS LIAISON: SUCCESSFUL PERCUTANEOUS EDGE-TO-EDGE MITRAL VALVE REPAIR IN PATIENTS WITH END-STAGE SYSTOLIC HEART FAILURE CAN CAUSE LEFT VENTRICULAR THROMBUS FORMATION

Poster Contributions
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Authors: Martin Orban, Daniel Braun, Mathias Orban, Raffael Thaler, Hasema Lesevic, Julinda Mehilli, Steffen Massberg, Joerg Hausleiter, Department of Medicine I, Klinikum Großhadern, University of Munich, Munich, Germany, Deutsches Herzzentrum München & 1. Medizinische Klinik, Technische Universität München, Munich, Germany

Background: Percutaneous edge-to-edge mitral valve repair is a non-surgical treatment option for patients with severe mitral regurgitation (MR) who have a high perioperative risk for conventional surgery.

Methods and Results: Between 2009 and 2012 we intended to treat 150 patients with severe MR with percutaneous edge-to-edge mitral valve repair in our center. Routine postinterventional transthoracic echocardiographic examinations revealed the new formation of left ventricular thrombi in 3 out of 150 patients. All three patients suffered from end-stage systolic heart failure with a left ventricular ejection fraction (LV-EF) below 20% and were successfully treated in terms of MR reduction (reduction of at least two MR grades). No thrombus formation was observed in 136 patients with a LV-EF > 20%. Thus the frequency of new left ventricular thrombus formation in the cohort of patients with a LV-EF ≤ 20% was 21 % (3 out of 14 patients). During hospitalization one of the 3 patients died after cardioembolic stroke and consecutive pneumonia. Another patient suffered from a thrombembolic myocardial infarction.

Conclusions: In patients with a severely depressed LV-EF a successful percutaneous edge-to-edge mitral valve repair may lead to a substantial reduction of intraventricular blood flow causing new formation of left ventricular thrombus.

A shows successful reduction of mitral regurgitation after clip implantation. Asterisk indicates clip (transesophageal view, 70°). B indicates new left ventricular thrombus (arrow heads, subxiphoidal view).