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Abstracttitel: Urgent coronary artery bypass surgery and heavy anti-thrombotic therapy: Aprotinin use does not increase short- or long-term mortality

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Aprotinin use in cardiac surgery has been associated with an increase in cardiac complications and mortality. The purpose of this study was to find out, if the outcome of cardiac patients exposed to aprotinin was similar in our institution, where the most common indication for aprotinin use has been the preoperative multimodal anti-thrombotic therapy started for the acute coronary syndrome.

The study was focused in patients hospitalized for an acute coronary syndrome necessitating an urgent operation with cardiopulmonary perfusion between May 2003 and April 2007. A surgical database was used to identify the potential cases and patient records were reviewed to verify eligibility and to retrieve the relevant perioperative data. The mortality data was obtained from the national register in May 2008.

528 patients were found with an estimated 94,8% coverage of the target population. 140 patients were treated with aprotinin (APR), 247 with tranexamic acid (TXA) and 141 with no antifibrinolytics (NAF). There were 11 ReDo patients in the APR group compared to just one each in the other groups. In the APR group, more patients were preoperatively exposed to glycoprotein-inhibitors and more heparin was used during surgery compared to both other groups. All patients were started on low dose aspirin and low molecular weight heparin within 24 hours after surgery. There was no difference in the short- or long-term mortality among the groups. The 30-day mortalities were 4,3%, 4,5% and 3,5%, the 6-month mortalities 8,6%, 7,3% and 6,4%, the 1-year mortalities 10,0%, 8,9% and 9,2% in the APR, TXA and NAF groups, respectively. There were no differences in myocardial infarcts or strokes, or in the need of renal replacement therapy among the study groups.

Contrary to recent arguments, aprotinin appears safe in this subgroup of acute cardiac patients. The heavy anti-thrombotic therapy preceding surgery, the generous use of heparin during surgery and the intensive postoperative anti-thrombotic therapy may all have mitigated the possible adverse effects of aprotinin.