# MINI VS FULL STERNOTOMY APPROACH FOR AORTIC VALVE REPLACEMENT- ONE TEAM EXPERIENCE

**R. Sobczynski, M. Bochenek, G. Filip, J. Sadowski**

*Department of Cardiovascular Surgery and Transplantology Jagiellonian University Krakow*

**OBJECTIVE**: Aortic valve disease is recently more common condition. More complicated patients are qualified for valve replacement. Surgeons are looking for methods which will be safer and more economic. The aim of this study was to compare different surgery approaches techniques: upper mini sternotomy and classical sternotomy.

**MATERIAL AND METHODS**: We studied 162 patients (92 men and 70 women) aged 22 to 91 (mean 62,9 +/- 15,66) who underwent aortic valve replacement in 2011 and 2012. Subjects were divided into 2 groups based on whether mini- or conventional sternotomy was performed. Patients were operated by one team. Among others aortic cross clamp, cardiopulmonary baypass time, and postoperative blood loss were investigated. Need for inotropic agents and transfusions in the Intensive care unit as well as postoperative troponine T maximum level were established. Association with those variables was tested by chi^2 and Mann-Whitney test.

**RESULTS**: The impact of the choice of sternotomy method was confirmed for total blood loss monitored by the postoperative drainage ($p<0,05$). What is more these patients received more fresh frozen plasma units ($p<0.05$). Regardless the similarity in daily stay in the intensive care unit, mean overall hospitalization is prolonged in patients with full sternotomy (mean 10,1 vs 8,5). Even though mini sternotomy resulted in greater ACC and CPB time (mean 75,36 +/- 15,23 and 127,98 +/- 21,19 vs 59,66 +/- 14,41 and 103,89 +/- 20,97), there were no significant differences established for maximum postoperative HsT blood level. No distinction was found in comparison for inotropic drugs usage. Relative risk (RR) for rethoracotomy and re-suture between groups was established at the level of 3,9 and 2,9.

**CONCLUSION**: Although the mini upper sternotomy requires more surgery skills, is a true benefit to the patient. What is also important, it can reduce the cost of staying in the hospital due to shorter hospitalization time and reduce the number of transfusions.