

# Trends in Surgery for Acute type A Aortic Dissection in Sweden 1992 – 2004

C. Olsson, N. Eriksson, E. Ståhle, S. Thelin, Uppsala, Sweden.

## **Objective**

To investigate the trends in use of surgical strategies and procedures for acute type A aortic dissection in Sweden 1992-2004, and to investigate the surgical and long-term mortality in this patient cohort.

## **Patients and methods**

From the Swedish Heart Surgery register, 598 patients were identified and eligible for analysis. Long-term survival was analysed with Kaplan-Meier and Cox analysis, and risk factors for surgical and long-term mortality were identified with multivariable logistic regression methods. To compensate for non-randomized treatment allocation, propensity score analysis of risk factors with special reference to surgical approach (supracoronary graft, composite graft, separate aortic valve and graft) was performed.

## **Results**

Mean age was 57 years (range 20-85 years). There were 427 men (71%). 240 patients were operated 1992-1997, 358 patients 1998-2004. Overall, 173 patients (29%) underwent aortic valve replacement; 136 with composite graft, and 37 with separate valve and graft. There were no differences in age or sex distribution for the different types of operation. Across time, the use of composite grafts were unchanged, supracoronary grafts increased and valve + graft decreased ( $p < 0.0001$ ). The use of hypothermic circulatory arrest increased from 40% in 1992-1997 to 70% in 1998-2004 ( $p < 0.0001$ ) and total arch replacement increased from 4.1% to 11% ( $p = 0.002$ ), whereas simultaneous coronary revascularization was unchanged, 8.2% vs. 11% ( $p = 0.33$ ). Overall surgical mortality was 121/598 (20%) and did not change significantly across time. In the recent era, surgical mortality was 17% for composite grafts, 20% for supracoronary grafts, and 25% for valve + graft operations. Long-term survival analysis and factors associated with surgical and long-term mortality will be presented.

## **Conclusions**

More patients were operated for acute type A aortic dissection during the later era of the study. The use of hypothermic circulatory arrest and arch replacement increased, and a larger proportion had supracoronary graft replacement. Long-term survival and risk factors including the transition to more radical surgery will be discussed.