

The Emilia-Romagna Registry of acute aortic dissection: early and mid-term results

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Background. Various risk factors influence postoperative outcomes of patients treated for Acute type A Aortic Dissection (AAAD) and the majority of published studies identified preoperative status as the most important predictor of in-hospital outcome. The aim of this study was to evaluate the incidence of malperfusion syndrome in patients with AAAD and its effect on hospital mortality and morbidity.

Methods. We examined data on 502 patients between January 2000 and December 2008 from Emilia-Romagna Regional Registry of AAAD. The mean age was 62 years and 66% were male. At presentation, various types of malperfusion syndrome were present in 136 patients (27%) (Group 1). The organ systems with malperfusion were as follows: cardiac 6%, cerebral 8%, spinal cord 1%, mesenteric 2%, renal 3%, iliofemoral 6%. Three-hundred sixty-six patients (Group 2) had not preoperative malperfusion. Arterial access for CPB was usually via the femoral artery (82%), while the axillary artery was used only in 15%. The procedures were performed on aortic cross-clamp in 48%. Hemiarch and total arch replacement was performed in 31% and in 16% of the patients, respectively. Open arch reconstruction was done with the aid of antegrade selective cerebral perfusion in 51%.

Results. Overall in-hospital mortality was 21%: 43% in Group 1 vs 13% in group 2 ($p < 0.001$). Postoperative neurological dysfunction was 9%. Cox regression analysis identified mesenteric (Hazard Ratio 5.1, 95% CI 2.3-11.2) and cardiac malperfusion (Hazard Ratio 2.6, 95% CI 1.4-4.7) as a significant risk factor for in-hospital mortality after surgery for type A dissection.

Conclusions. Results of surgical treatment of AAAD are acceptable. Preoperative malperfusion is a significant risk factor influencing perioperative and mid-term survival after surgery for acute type A dissection.