

Gender differences in cardiac surgery

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Gender differences in outcome after cardiac surgery, e.g. after coronary artery bypass grafting (CABG) and heart transplantation, have been described for many years. Only few data on gender differences after mechanical circulatory support are available. We analyzed large data sets from our in-hospital database in terms of gender differences in outcome after CABG (n=17,528), heart transplantation (n=1263) and mechanical circulatory support (n= 855 patients). Analysis of 17 528 patients (4278 women, 13,250 men) undergoing CABG showed a 1.5-fold ($p<0.001$) higher age-dependent early all-cause mortality rate in women than in men, identifying gender-specific risk factors. In an ongoing prospective study we are investigating the impact of heart failure, hormonal status and psychosocial factors on outcome after CABG with gender specific considerations. A retrospective analysis of our 1263 heart transplant patients (412 women, 851 men) showed the best outcome in female recipients of a female heart and the poorest in male recipients of a female heart, although women had more antinuclear and anti-HLA antibodies, suggesting a higher level of alloreactivity. It has been discussed that female patients are under-represented in highly technical treatment approaches. We will present gender specific analysis of our 855 patients with mechanical circulatory support (151 women, 704 men). The underlying mechanisms of these gender specific phenomena are not yet completely clear. Various studies in our institute, networking with other study groups elsewhere and focusing on genetic, molecular biological and psychosocial factors, will contribute to a better understanding.