

Cardiac and peripheral vascular disease in heart transplantation

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Purpose: To assess the prevalence of cardiac allograft vasculopathy (CAV) and peripheral vascular disease (PVD) in long-term follow-up after heart transplantation (HTx) as well as the role of the classic cardiovascular risk factors (CCVRF) for their development.

Methods: We retrospectively analysed the patient data collected at the last follow-up.

Results: The study population consisted of 174 patients with a mean follow-up of 13.1 ± 6.5 years after HTx. The prevalence of CCVRF was high with diabetes in 26.4% (n=46), hypertension in 80.5 % (n=140), and dyslipidemia in 88.5 % (n=154) of the population. Approximately one-third of the patients had ischemic heart disease (IHD) prior HTx (n=65, 37.4 %). The prevalence of CAV was high (n=71, 40.8 %) and more than half of the CAV cohort had undergone interventional or surgical therapy (n=40, 56.3 %). PVD was diagnosed in 25 patients (14.4 %), although only subjects with suspected disease were screened. Therefore, most of the patients (n=22, 88 %) had undergone interventional or surgical treatment, amputation for vascular reasons was performed in 16 % (n=4). More than half of the patients with PVD (n=15, 60 %) had also CAV (p=0.05). IHD prior HTx was associated with a greater risk for development of PVD (OR 5.6, 95% CI 2.2 – 14.3, p < 0.001) whereas CAV was more common in diabetics (OR 2.26, 95% CI 1.1 – 4.4, p=0.026). Patients with PVD were older at the time of HTx (44.1 ± 15.6 vs. 51.8 ± 8.1 years in PAD, p < 0.001). In contrast, no age-related differences were observed in CAV (44.2 ± 16.2 vs. 46.7 ± 13.0 years in CAV, p=0.26).

Conclusions: The ischemic nature of the antecedent disease is associated with a higher prevalence of PVD after HTx. Diabetes is a relevant factor for the development of CAV in HTx.