P111: ASSOCIATION AND CLINICAL RELEVANCE OF ABSENCE OF LOWER LIMB ARTERIAL PULSE AND CORONARY ARTERY DISEASE IN HEMODIALYSIS PATIENTS

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Vascular calcification (VC) is linked to post-transplant cardiovascular events in the long term. We aimed to evaluate whether pretransplant chest X-ray based aortic arch calcification (AoAC) or pulse wave velocity measurement can better predict post-transplant cardiovascular or cerebrovascular events, and to assess the progression of calcification within 2 years.

**Methods:** Our single-center observational longitudinal study enrolled 40 kidney transplant recipients (KTR) without previous history of vascular events (no cardiovascular, cerebrovascular events, no peripheral artery disease). Two radiologists evaluated pretransplant and posttransplant (after 2 years) AoAC on chest X-ray by using two different AoAC scales: AoAC grade evaluation [1] and AoAC score as suggested by Ogawa et al. in 2009 [2]. Cohen’s kappa coefficient was 0.75. The mismatching results were repeatedly reviewed and resulted in consensus. Carotid-femoral (cfPWV) and carotid-radial pulse wave velocity (cPWV) was measured using applanation tonometry and the PWV ratio (cPWV/rPWV) was calculated. Patient clinical, biochemical data and cardiovascular/cerebrovascular event rate were monitored within 2 years.

**Results:** During 2-year follow-up 5 patients experienced cardiovascular events, which were predicted by PWV ratio, but not related to AoAC. In 3 patients, we observed progression of AoAC, in others – AoAC was less evident or remained unchanged in 2-years follow-up. AoAC score [2] could better describe the extent of vascular calcification in KTR.

**Conclusions:** KTR without previous vascular events have quite low cardiovascular/cerebrovascular event rate within 2-year follow-up, which are better predicted by pretransplant PWV ratio. AoAC posttransplant regression is evident even when simplified chest X-ray scales.

### References
1. Symeonidis G, Papanas N, Giannakis I, Mavridis G, Lakasas G, Kyriakidis G. Arterial stiffness increases with age in overall population. Background: Arterial stiffness is known marker of poor cardiovascular prognosis. Combining coronary and PAD evaluation helps to assess the prognosis of coronary artery disease. Objectives: To determine the association between PAD and CAD in patients treated by haemodialysis in the waiting list for renal transplantation and to assert the influence of that association on prognosis and clinical management. Methods: 1246 renal transplant candidates underwent coronary angiography. Peripheral arterial disease was defined as either absence of pulse in the lower limb or a history of gangrene, amputation, or vascular intervention.

**Results:** The prevalence of peripheral arterial disease and coronary artery disease were 34% and 52%, respectively. The association of peripheral artery disease with coronary artery disease was significant (68% versus 32%, OR = 2.60, 95% CI 2.03–3.32, P = .0001). The specificity, sensitivity, positive predictive value, and negative predictive value were 77%, 44%, 67%, and 56%, respectively. Peripheral arterial disease predicted the indication of coronary intervention. Patients lacking peripheral arterial disease and coronary artery disease enjoyed higher event-free survival. Peripheral arterial disease and coronary artery disease together did not add to the very high cardiovascular risk associated with each isolated condition. Death by any cause was influenced by peripheral arterial disease independently of coronary artery disease.

**Conclusions:** A safe and inexpensive clinical method was useful to assess the association between PAD and CAD and may be useful to select patients for invasive studies. PAD was equivalent to CAD as a predictor of cardiovascular prognosis. Combining coronary and PAD evaluation helps to assess the prognosis of patients with CKD with reasonable accuracy.