

Carotid calcium score is associated with coronary calcium score in patients with ESRD on HD

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Introduction: In patients with end-stage renal disease (ESRD) on hemodialysis (HD), the degree of coronary calcium score is associated with cardiovascular risk and mortality. Those with higher degree of carotid calcium score are known to have higher cerebrovascular risk and mortality. However, there is no study which evaluates a correlation between coronary artery calcium score and carotid calcium score. **Methods:** This is a cross-sectional study involving ESRD patients who were dialyzed in Soonchunhyang Cheonan Hospital and agreed to participate in the study. Brain computed tomography (CT) and heart CT were performed to evaluate the carotid and coronary calcium score, and the routine laboratory data in artificial kidney center were analyzed. **Results:** Total 49 patients were included. A mean age of the group was 58.5±12.1 year, and a mean duration of HD 67.7±44.2 months. Serum calcium, phosphorus, intact parathyroid hormone, and alkaline phosphatase (ALP) levels were 8.9 (8.6 ? 9.1) mg/dL, 4.1±1.4 mg/dL, 241.5±173.9 pg/mL, and 63 (46 ? 87) IU/L, respectively. Carotid and coronary calcium score were noted as 125.7 (23.3 ? 366.7) and 172.6 (7.2 ? 798.7), respectively. The patients were divided into two groups, <50 or ≥ 50 percentile, based on carotid calcium score. Among the variables, there was a significant difference in age (< 50 percentile, 51.5±8.9; ≥ 50 percentile, 65.2±10.9 year) between the two groups. The partial correlation analysis showed that a correlation between coronary calcium score and carotid calcium score was statistically significant (r=0.556, p<0.001), when the age was set as confounding variables. **Conclusion:** In patients with ESRD on HD, coronary calcium score was correlated with carotid calcium score in patients with ESRD on HD.

2 Cases of kidney transplantation in HIV-infected Patients

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Introduction: Human immunodeficiency virus infection has spread all over the world over the past three decades. As the prevalence of HIV-positive patients with end-stage renal disease becomes high, kidney transplantation is considered as a new alternative method. **Case 1:** A 41-year-old-male visited our ER for chest pain. He underwent coronary angiography for unstable angina. Creatinine was 19.32 mg/dL and after coronary angiography, he underwent hemodialysis. HIV-infection was detected in the process of preparation for hemodialysis and antiretroviral therapy was initiated with raltegravir, abacavir and lamivudine. About 8 months later, he had a stable CD4+T-cell count >200 cells/μL and HIV RNA <20 copies/mL and underwent kidney transplantation. After kidney transplantation, immunosuppression included tacrolimus (trough level of 10 to 15 ng/mL), MMF, and prednisolone and HAART therapy was abacavir, raltegravir, and lamivudine. 18 months after transplantation, he is still on immunosuppressant drugs and antiretroviral agents with CD4+ T cell count >400 cells/μL and HIV RNA <20 copies/mL. **Case 2:** A 33-year-old male undergoing hemodialysis for 2 years was referred to our hospital for HIV-infection. Antiretroviral therapy was started with lopinavir, ritonavir, abacavir and lamivudine. After 3 months of treatment, he underwent a live donor kidney transplantation. 3 weeks after transplantation, he was admitted for the increased serum creatinine of 1.9 mg/dL. Doppler showed mildly elevated resistive index (RI=0.8-0.9) that indicates the rejection of transplanted kidney. He received steroid pulse therapy for 3 days. 1 week later, serum creatinine decreased to 1.24 mg/dL. About 4 years after transplantation, he is still on immunosuppressant drugs and antiretroviral therapy with HIV RNA viral load below detection limit and CD4+T cell count >400 cells/μL. **Conclusion:** We transplanted living donor kidneys into 2 HIV-infected patients undergoing hemodialysis and they still have a transplanted kidney with normal function. In light of this fact, we hope our experience can be a good example for doctors who consider kidney transplantation for HIV-infected patients.