Uremic cardiomyopathy may improve with kidney transplantation: a case report

Seung Hwan Song, Dami Jung, Ku Yong Chung

Department of Surgery-Transplantation, Ewha Womans University Seoul Hospital, Korea, Republic of

Background: In patients with chronic kidney disease (CKD), left ventricular (LV) hypertrophy with impaired LV systolic function, which is called uremic cardiomyopathy is often observed. In recent studies, CKD may cause and aggravate uremic cardiomyopathy in patients without coronary artery disease. We report a case of improvement of severe uremic cardiomyopathy without coronary artery disease after kidney transplantation (KT).

Case report: A 43-year-old male, who received deceased donor kidney transplantation in 25th January, 2019. Time on dialysis before KT was 73 months. The cause of CKD was IgA nephropathy. At the time of admission, an echocardiogram revealed a LV ejection fraction (LVEF) of 8%, severe global hypokinesia, and an enlarged bilateral chamber. A coronary angiogram demonstrated normal coronary arteries. He underwent a deceased donor kidney transplantation from marginal donor and produced urine soon after the transplantation. He was treated with the immunosuppression regimen, which included prednisone, mycophenolate mofetil and tacrolimus. Patients were also receiving other medicines than immunosuppressants such as antihypertensive drugs, taken both before and after KT. Successful KT improved his cardiac symptoms and increased his LVEF to 16% at POD# 17. His LV function improved as his LVEF increased to 32%, which has been maintained along with a favorable renal allograft function for 4 months. Two years after KT, his LVEF was 60% and the blood creatinine level was maintained at 1.36 mg/dL.

Conclusions: This case demonstrates the patients with severely impaired cardiac function could be able to receive significant benefits after successful KT. KT should be considered for CKD patients with LV systolic dysfunction.

Corresponding author: Seung Hwan Song

E-mail: seunghwanhappy@ewha.ac.kr

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