

Early Allograft Calcifications After Kidney Transplantation

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Early allograft calcifications after kidney transplantation (KT) have already been reported, but the clinical implications of this finding are not clear thus far. Patient-related factors such as age, gender, underlying renal disease, and dialytic modality, seem to be irrelevant. It has been postulated that factors promoting the development of metastatic calcifications, including elevated calcium phosphate product and severe secondary hyperparathyroidism, could play a causal role. Here we report a case of a KT patient who developed early kidney calcifications which were associated with severe allograft dysfunction. *UROLOGY* 79: e44, 2012. © 2012 Elsevier Inc.



Figure 1. Unenhanced CT image shows a normal transplanted kidney. There are no calcifications or hydronephrosis.

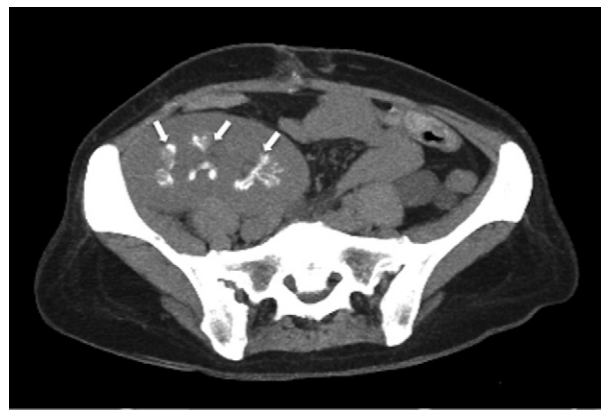


Figure 2. Unenhanced CT image shows multiple pyramidal calcifications in the transplanted kidney (arrows). This image was recorded one month after that showed in [Figure 1](#).

A 47-year-old woman underwent non-heart-beating donor kidney transplantation (KT) with a long ischemia time. The patient was discharged receiving tacrolimus as an immunosuppressive agent. One week later the patient presented with acute abdominal pain; a computed tomography (CT) scan showed a strangulated paraumbilical hernia, but the transplanted kidney appeared normal ([Fig. 1](#)). The patient was operated and then discharged; blood examinations showed: serum creatinine 3.2 mg/dL, phosphorus 4 mg/dL, and parathyroid hormone (PTH) 653 pg/mL. One month later the patient became febrile and asthenic; serum creatinine was 10.3 mg/dL, associated with increased phosphorus and PTH levels (11.3 mg/dL and 689 pg/mL, respectively). Abdominal ultrasonography and CT scan showed the presence of diffuse pyramidal calcifications in the transplanted kidney, sugges-

tive for nephrocalcinosis ([Fig. 2](#)). Because of persistent graft dysfunction, fever, and positive urine culture, the kidney was explanted. The pathologic examinations confirmed the presence of pyramidal calcifications associated with diffuse papillary necrosis. Our patient presented several possible causes of renal calcifications, including long ischemia time, uncontrolled hyperparathyroidism and hyperphosphatemia, infections, and the use of tacrolimus, already associated with calcifications.^{1,2} This case emphasizes that it is necessary to give prominence to factors related to KT calcifications, which have a great impact on graft function and survival.³

References

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