中文題目：腎移植病患使用 Tacrolimus 引起之嚴重淋巴水腫

英文題目：Tacrolımus-induced Lymphedema in a Renal Transplant Recipient: A Case Report

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Introduction:

Calcineurin inhibitors are commonly preferred for solid organs for transplantation. Although these drugs have various adverse effects, tacrolimus (TAC)-related lymphedema has not been reported. We present a case of TAC-induced therapy-resistant lymphedema over lower extremities and lower abdominal wall with ambiguous pain.

Case Presentation:

A 60-year-old man with a history of end-stage renal disease of unknown etiology received a living donor kidney transplant from his son in October 2018. The transplant was a 1-haplotype match with negative pre-transplant flow cytometry cross matches. The patient's early post-transplant course was uneventful. The initial immunosuppressant regimen was consisted of TAC, mycophenolate mofetil (MMF), and steroids during the first 3 weeks after transplantation. He started oral TAC tablet (5 mg twice daily), with an initial trough goal of 8–12 ng/mL and tapered gradually with an eventual mean dose of 3 mg, and the trough level ranged from 5 to 8 ng/mL.

The patient first complained about pain over his progressively swollen bilateral lower limbs, 13 months after the initiation of TAC. His left leg was worse than the right. The swelling has extended from the toes towards the thigh, buttocks and up to lower abdominal wall. Skin crease was noted at the junction between his dorsal feet and toes, showing positive Stemmer's sign. Clinical examination showed non-pitting edema in bilateral lower limbs up to lower abdominal wall. The ambiguous pain with local heat across the bilateral leg and thigh, has corresponded to a score of 7 on the visual analog scale (VAS). In addition, the circumferences of 5 measurement sites showed differences of ≥ 4.5cm on his left lower limb as opposed to contralateral leg.

Venography and venous doppler echo have ruled out any venous thrombus or deep vein thrombosis (DVT). Lymphoscintigraphy showed mild dermal backflow on left medial lower limb, with decreased lymph nodes uptake in the bilateral lower limbs, lymphatic obstruction was diagnosed.

Discussion:

Nonsurgical approaches such as diuretics and decongestive therapy were first implemented after multidisciplinary discussion before TAC termination was considered. Unfortunately, low-dose

loop diuretics did not result in any notable improvement. Decongestive therapy included aggressive manual lymphatic drainage and compression therapy including stocking and bandage methods also did not help. Sixteen months after its initial use, TAC was discontinued up on patient's request, when he became intolerable to the pain and swelling which has devastated his quality of life. Nevertheless, marked improvements in the swelling of the lower abdomen and lower extremities were noted two weeks after TAC was stopped. The pain level of lower limbs has improved from 7 to 3 in VAS. For this patient, TAC-induced lymphedema was highly speculated. His kidney graft function has remained stable with the use of prednisone and titrated low dosage of MMF for immune suppression. Inform consent was obtained from the patient regarding possible graft failure associated with the discontinuation of TAC. He receives regular examinations and follow-up at out-patient clinic.

Conclusion:

Lymphedema is a rare adverse effect of Tacrolımus, which has not been reported before. In this renal transplant case, the Tacrolımus was discontinued due to intolerable lower limbs swelling pain, despite several decongestive therapy.