Renal Transplantation in Fabry's Disease

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Dear Sir,

We have read with interest the report of Donati et al. [1] concerning a cooperative review of 12 patients with Fabry's disease in replacement therapy for chronic renal failure. 8 patients underwent renal transplantation, 4 of whom had functioning kidneys for between 12 and 84 months. They concluded that Fabry's disease should not be considered a relative contraindication to renal transplantation.

We have recently reported in a local journal [2] a patient with Fabry's disease who developed end-stage renal disease at 30 years of age. For 2 years he received hemodialysis treatment and suffered recurrent acropar-esthesias. The patient received a cadaver renal transplant with conventional immunosuppressive drugs which included steroids and azathioprine. The posttransplantation course was without complications except for a late wound dehiscence. The patient was discharged with an excellently functioning graft and his acroparesthesias disappeared. Plasma pretransplantation α -galactosidase levels were 1.34 nmol/ml/h and 3 months after transplantation 1.85 nmol/ml/h (normal: 33.31–84.80 nmol/ml/h). His present status, 28 months after transplantation, is as follows: he works full time and can cover 40 km daily on his bicycle. Serum creatinine is 1.9 mg/dl, creatinine clearance is 78 ml/min and urine protein is negative.

When terminal renal failure is caused by a multisystem disease, such as Fabry's disease, treatment by regular hemodialysis or renal transplantation may be considered inadvisable, as death from failure of another organ is predictable. Experience to date, however, does not suggest that the extra problems arising when terminal renal failure is due to Fabry's disease are sufficient to justify withholding therapy.

Although plasma enzyme levels do not change following renal transplantation [3–5], the functioning kidney can provide clearance of substrate by urinary excretion of an amount of ceramide [6,7] preventing their progressive accumulation in other tissues.

The occurrence of the ceramide accumulation in the renal graft appears to add another risk to transplantation in this condition. Early histological recurrence of the disease in the engrafted kidney has been reported in 1 case [8]. In 2 other cases there was no evidence of gross accumulation of ceramide after 8 and 4 years and the deposits were scanty and localized only in

vascular endo-thelial cells [5, 9]. In 2 other patients no histological recurrence of Fabry's disease was found in the graft [10, 11]. It may well prove to be unimportant compared with the limitation already placed on the life of a cadaveric renal graft by eventual rejection.

It seems unjustified at present to withhold regular dialysis or cadaveric transplantation from a patient solely because renal failure is due to Fabry's disease. The results of regular hemodialysis and transplantation in patients treated in Europe are sufficiently encouraging to prompt a survey of other patients with this condition, treated in renal units throughout the world.

The review of Donati et al. [1] and several case reports of long-term transplantation success [9,11–15] should lead physicians to consider patients with end-stage renal disease from Fabry's disease candidates for renal transplantation. The infectious complications leading to high-rate posttransplantation mortality, as mentioned in early reports [14], may today be improved with the use of modern immunosuppressive protocols.

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