



Treatment of persistent hypercalcemia in kidney transplant recipients with Cinacalcet

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INTRODUCTION AND AIMS

Persistent hyperparathyroidism and hypercalcemia occur 10-50% of recipients after successful kidney transplantation. Hypercalcemia is associated with graft dysfunction, hypertension, nephrocalcinosis and cardiovascular disease. Cinacalcet treatment is an alternative option for recipients with hypercalcemia. We evaluate the efficiency of cinacalcet treatment in kidney transplant recipients with persistent hyperparathyroidism and hypercalcemia.

METHODS

Nine patients (5 male, 4 female; 8 deceased, 1 living donor; 43.3±8.9 years) who had persistent hyperparathyroidism (parathyroid hormone-PTH >150 pg/mL) and hypercalcemia (Ca >10.5 mg/dL) were enrolled the study. Ultrasonography (USG) and parathyroid scintigraphy were performed for all recipients. Patients received 30 mg/day cinacalcet initially. Serum calcium (Ca), phosphor (P), albumin (alb), alkaline phosphatase (ALP), PTH, creatinine were measured at baseline and 1st, 3rd, 6th, 12th months of the treatment. Cinacalcet dose was modified according to laboratory findings at the visits.

RESULTS

Cinacalcet was administered at 17.9±15.1 months after transplantation and used for 11.9±5.5 months. Five recipients received cinacalcet for 12 months, 4 (2 withdrawn, 1 underwent parathyroidectomy, 1 could not have off-label permission) for 6 months. Parathyroid scintigraphy revealed parathyroid adenoma in 6 recipients, parathyroid hyperplasia in 1 and normal findings in 2. Parathyroid adenoma was determined in 6 recipients with USG. In 3 recipients USG revealed normal findings. In 2 recipients cinacalcet was administered due to hypercalcemia after parathyroidectomy. Serum calcium levels were significantly decreased at 1st (p=0.008), 3rd (p=0.018), 6th (p=0.011) and 12th (p=0.043) months of the cinacalcet treatment. There were no significant changes in serum, creatinine, P, ALP and PTH levels. After cessation of cinacalcet treatment serum Ca levels increased from 10.1±0.45 mg/dL to 11.2±0.53 mg/dL (p=0.018) after 6 month. Three recipients with parathyroid adenoma underwent parathyroidectomy after cessation of cinacalcet because of persistent hypercalcemia.

CONCLUSIONS

After kidney transplantation cinacalcet is considered as an alternative treatment option for persistent hypercalcemia and hyperthyroidism. Cinacalcet has decreasing effect on serum Ca levels although it's an expensive option and after cessation the drug serum Ca levels tend to increase to initial levels. We conclude that cinacalcet might be an appropriate treatment for a subgroup of recipients with hypercalcemia without parathyroid adenoma or who had contraindication for surgery.

