



Parathyroidectomy for the Treatment of Tertiary Hyperparathyroidism in Patients Having Undergone Kidney Transplantation

Suhas R. Bharadwaj, MS; Kevin J. Carlson, MD; Randall Bloch, BS; Matthew J. Bak, MD
EVMS

Introduction:

Hyperparathyroidism can persist after renal transplantation in patients with preexisting secondary hyperparathyroidism. These patients carry an increased risk of mortality, allograft loss and metabolic bone disease if untreated. Medical therapy is an option for mild hypercalcemia, but surgical intervention has proven a superior treatment for tertiary hyperparathyroidism. We review our surgical experience treating hyperparathyroidism in patients with a functional transplanted kidney.

Methods:

Retrospective review of all patients undergoing parathyroidectomy (PTX) for tertiary hyperparathyroidism at a single tertiary care institution between 2011-2018 was performed under IRB approval. Normalization of serum calcium at 6 months was evaluated. Secondary outcomes included graft function and clinical hypocalcemia.

Results:

A total of 16 patients were identified, 9 receiving subtotal or total PTX and 7 partial PTX. Baseline biochemical profile was similar between the two groups though patients undergoing total/subtotal PTX had a greater intraoperative reduction in PTH (83.11% vs. 65.12%, $p=0.008$). There was no difference in the rate of eucalcemia at 6 months (7/9 vs. 6/7, $p=0.984$) between the groups. A greater decrease in GFR at 6 months after partial PTX trended towards significance (14.3% vs 8.3%, $p=0.067$). All episodes of clinical hypocalcemia ($n=3$) occurred in the total/subtotal PTX group ($p=0.26$).

Conclusions:

In patients with tertiary hyperparathyroidism, similar rates of eucalcemia were observed after comparing different surgical approaches. The significance of changes to renal transplant function and rates of hypocalcemia are limited by our sample size. Larger, multi-institutional studies are needed to clarify the ideal surgical management of tertiary hyperparathyroidism.