

Body Composition Changes after Kidney Transplantation

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Introduction: After kidney transplantation (KT), there are several factors those affect body compositions such as reversal of uremia, increase in appetite and immunosuppressive agents etc. In this study we explored the change in body composition of the transplanted patients in 6 months after kidney transplant.

Methods: All the patients who received kidney transplant at Rajavithi Hospital between February 2008 – October 2010 were enrolled. We excluded the patients with limbs loss. Body weight (BW), body mass index (BMI) and waist to hip ratio (WHR) of each patient were recorded and skeletal muscle mass (SMM), body fat mass (BFM), percent body fat (PBF), osseous mass (OM) and extracellular water (ECW) of each patient were measured by bioimpedance analysis. Then all these parameters at the 1st week vs. at 6±1 months after KT were compared.

Result: Seventeen patients were analyzed. There were significantly increase in WHR (median [25th-75 percentiles]) (0.86 [0.83-0.88] vs. 0.89 [0.85-0.90], p=0.024), BFM (9.30 [5.55-10.45] vs. 13.90 [8.70-17.65] kg., p=0.006), PBF (15.40 [9.70-22.60] vs. 23.40 [16.65-30.20] percent, p=0.005) and decrease in OM (2.67 [2.52-2.98] vs. 2.59 [2.32-2.93] kg., p=0.013) and ECW (15.00 [13.10-15.60] vs. 14.00 [11.50-14.60] kg., p=0.011). BW and BMI trended to increase, SMM trended to decrease but didn't reach the statistical significance.

Conclusion: Six months after KT, the patient body compositions change toward more fat but less osseous mass and extracellular water.