

## **COMPLICATIONS OF PEDIATRIC LIVE-DONOR KIDNEY TRANSPLANTATION IN DEVELOPING COUNTRY: SINGLE CENTER'S EXPERIENCE FROM EGYPT**

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**Objectives.** To study complications of chronic renal failure (CRF) among pediatric live-donor kidney transplant recipients.

**Methods.** Between March 1976 and December 2005, 1785 live-donor kidney transplants were carried out in our center, out of them 292 were 20 years old or younger (mean age 12.8 years, ranging from 4 to 20 years). Clinical and laboratory parameters were analyzed retrospectively in these 292 patients. They were 182 boys and 110 girls. Patients transplanted before 1988 were treated with prednisolone and azathioprine as combined therapy. From 1988 to 1998 a triple regimen comprising of prednisolone, azathioprine and cyclosporine A (CsA) was administered. Tacrolimus and mycophenolate mofetil (MMF) were introduced as a primary therapy since 1998. Assessment of the growth, anemia, infections, and surgical, cardiac, neurologic, bone and other medical complications was performed.

**Results.** Triple immunosuppression (prednisone + CsA + azathioprine) was used in 68.2% of transplants. Acute rejection rate was 47.6%, chronic rejection rate was 31%. Hypertension (62%) was the commonest complication. Anemia was diagnosed in 61%. A substantial proportion of patients (48%) were short, with height standard deviation score (SDS) less than -1.88. The overall infection rate was high and the majority (54%) was bacterial. Malignancy was diagnosed in 8 (3%) patients. The incidence of urological complications was 14% and vascular complications 1%. Cardiac complications included left ventricular hypertrophy (LVH) in 47.9% of patients, left atrial enlargement (31.5%) and left ventricular dilatation and systolic dysfunction (13.7% for each). Neuropathic changes were found in 19% of our cases with more affection of the distal muscles of lower limbs. Other complications included avascular bone necrosis in 8% (all of them in the hip joint) and bone loss in 60% of patients.

**Conclusion.** Despite long-term success results of pediatric renal transplantation in a developing country, there is a risk for significant morbidity.