
Some observations on the effect unilateral nephrectomy in normal kidney transplant donors

Nasr Araft Belacy

Many transplant centers consider a living donor transplant, to be the optimal choice for the treatment of terminal uraemia. The immediate risks and complications of donor nephrectomy have been studied and defined. Recent experimental work questions the long term safety of donor nephrectomy. The aim of this work was to evaluate the long term consequences of unilateral nephrectomy in a group of living related donors after variable periods of donation. 65 subjects (20 control and 45 donors) were investigated as regards serum creatinine, urine creatinine, creatinine clearance, complete urine analysis, 24 hours urinary protein excretion, clinical examination including blood pressure measurement and size of the kidney as measured by ultrasonography. We found that there was a significant increase in serum creatinine after nephrectomy in all donors, while urine creatinine and creatinine clearance decreased significantly. When compared with the control group, serum creatinine was significantly higher and creatinine clearance was significantly lower in donors after nephrectomy than in control subjects. Urine analysis showed microscopic haematuria in only 7 donors. 24 hours urinary protein excretion showed no difference from the values of control subjects. However, 5 cases showed gross proteinuria. Blood pressure showed no difference after nephrectomy from the values before nephrectomy or from that of control subjects. However, 3 cases showed diastolic hypertension. The changes in the investigated parameters showed no correlation with the time elapsed after donation except for the 24 hours urine protein which was significantly higher after 2 to 10 years of donation than after less than 2 years. Also, there was no correlation between the changes in the parameters investigated and the age of donors except for urine creatinine which was significantly lower in the group of donors whose ages are above 30 years. From our observations we conclude that unilateral nephrectomy does not result in progressive deterioration in the remaining kidney function and that the mild changes that occur after nephrectomy have no clinical importance.