The Evolution of Function of Transplanted Cadaveric Kidneys in Conditions of Immunosuppressive Therapy*
M J RATNER
Academy of Medical Sciences of the USSR, Moscow, USSR

In patients treated with prednisolone and Imuran after transplantation of cadaveric kidneys and in whom oliguria was absent or brief we have used once or twice a week a battery of kidney function tests. These include determinations of endogenous creatinine clearance, clearance of protein, the ability of the kidney to concentrate the urine under conditions of standard dehydration, capacity for urinary osmotic dilution, and the excretion of ammonia and hydrogen ions during standardised metabolic acidosis. During the first two weeks the functioning nephron mass was 30–50%, osmotic concentration by the functioning nephrons was not decreased, but osmotic dilution was lowered. Ammonia excretion was almost completely absent, and renal tubular acidosis was regularly observed. Glomerular permeability for protein was raised to a greater degree during the first week and was significantly lowered during the second. After 2–3 months had passed, the functioning nephron mass rose to 50–70% and osmotic concentration and dilution in the functioning nephrons were normal. The glomerular permeability for protein disappeared completely or very nearly so. The decrease of ammonia excretion and the renal tubular acidosis abated more slowly.

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