Long-term Haemodialysis after Kidney Transplantation

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Four patients needed dialysis treatment after cadaveric kidney transplantation for a period between 41 and 98 days. All patients had been nephrectomised prior to transplantation. All kidneys had warm ischaemia times of more than 50 min and were perfused with Collins’ solution. The ischaemic tubular damage seemingly caused a prolonged period of oligo-anuria. Dialysis treatment was discontinued when urine volumes exceeded 1500 ml per day and the serum creatinine was below 5 mg/100 ml. All patients returned to normal life. One of them (CD:14) died afterwards from miliary tuberculosis. The other three patients are well now, 10 to 12 months after transplantation. Their creatinine clearance values are 25, 87 and 70 ml/min respectively. For the therapy of prolonged kidney failure after transplantation without the complications of infection or severe rejection episodes we estimate that dialysis treatment up to three months may be needed.
Figure 1. Kidney function (--- = serum creatinine; □ = urine volume) after transplantation of a cadaveric kidney. Warm ischaemia time: 65 min, cold ischaemia time: 282 min, perfusion: 300 ml Collins' solution.
25 dialyses during 60 days were necessary.

Figure 2. Kidney function (--- = serum creatinine; □ = urine volume) after cadaveric kidney transplantation. Warm ischaemia time: 120 min, cold ischaemia time: 600 min, perfusion: 300 ml Collins' solution.
18 dialyses during 41 days were necessary.
Figure 3. Kidney function (— = serum creatinine; □ = urine volume) after cadaveric kidney transplantation. Warm ischaemia time: 50 min, cold ischaemia time: 420 min, perfusion: 300 ml Collins' solution. 41 dialyses during 98 days were necessary.

Figure 4. Kidney function (— = serum creatinine; □ = urine volume) after transplantation of a cadaveric kidney. Warm ischaemia time: 65 min, cold ischaemia time: 420 min, perfusion: 300 ml Collins' solution. 26 dialyses during 53 days were necessary.