Kidney-Pancreas Transplantation

**FIGURE 15-23**
Glycosylated hemoglobin before and after pancreas transplantation. All patients have an abnormal hemoglobin A1 value before pancreas transplantation. Most patients, however, maintain a normal hemoglobin A1C after successful pancreas transplantation. (From Morel and coworkers [20]; with permission).

**FIGURE 15-24**
Effects of pancreas transplantation on diabetic neuropathy. Careful studies of motor index (panel A), sensory index (panel B), and autonomic index (panel C) show a general trend of improvement over 42 months in patients who received pancreas transplantation compared with patients in the control group. In patients with pancreas transplantation, 70% had improved results on motor nerve tests, nearly 60% on sensory tests, and 45% on autonomic tests. In patients in the control group, only 30% had improved results on motor and sensory tests, 12% had improved autonomic tests, and nearly 50% had deterioration of neurologic function. (From Kennedy and coworkers [21]; with permission).

**FIGURE 15-25**
Effects of pancreas transplantation on diabetic retinopathy. Retinopathy does not appear to improve after pancreas transplantation. A similar rate of deterioration was observed in both patients who had successful pancreas transplantation compared with patients with diabetes who had kidney transplantation alone. (From Ramsay and coworkers [22]; with permission).
Effects of pancreas transplantation on recurrent diabetic nephropathy. Pancreas transplantation appears to prevent the subsequent development of diabetic nephropathy in renal allografts [23]. Both mean glomerular volume (panel A) and mesangial volume (panel B) were significantly lower in patients with successful pancreas transplantation compared with recipients with diabetes who had unsuccessful pancreas transplantation.

Effects of pancreas transplantation on established diabetic nephropathy. Although there appears to be a benefit in the prevention of diabetic nephropathy, there does not appear to be a benefit in patients who undergo pancreas transplantation in reversing established diabetic glomerular lesions. In this study, mesangial fractional volume increased (panel A) and mean glomerular volume decreased (panel B) in pancreas transplantation recipients but no significant change in total mesangial volume (panel C) occurred over a 5-year follow-up. (From Fioretto and coworkers [24]; with permission).

Effects of pancreas transplantation on microvascular disease. The benefits of pancreas transplantation on vascular disease have been variable. A, In this study, thermography demonstrated a clear-cut improvement in diabetic microvascular disease after successful pancreas transplantation [25]. B, However, no evidence exists that successful pancreas transplantation results in the regression of established macrovascular disease.
References


