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Successful follow-up twenty years after heart transplantation¹

Long-term follow-up after heart transplantation

On September 23rd, 1985, a 34-year-old man with end-stage dilated cardiomyopathy of unknown origin and with history of severe dyspnea (NYHA III–IV) during the preceding five years underwent orthotopic heart transplantation (HTX). Left ventricular ejection fraction (EF) before HTX was 20%. Immunosuppression included cyclosporine A, azathioprine and prednisone. Acute cellular rejections occurred 14, 49 and 70 days after HTX. Six months after HTX the patient returned to full work as a farmer. The long follow-up was characterised by excellent quality of life, the lack of further rejections, severe infections and of secondary

tumors. Twenty years after HTX, selective coronary angiography and intravascular ultrasound (IVUS) showed only mild coronary stenoses (fig. 1) associated either to de novo atherosclerotic lesions and/or graft vasculopathy. This surprisingly mild vasculopathy may be due to the excellent match (two HLA mismatch) with few cellular rejections in the very early course after HTX. EF was normal (60%). The major issue during follow-up was the appearance of moderate to severe renal function impairment probably related to a side effect of cyclosporine. Mild renal function impairment occurred few months after HTX with progressive severe deterioration of the creatinine clearance down to 27 ml/min/m² twenty years after HTX. Renal biopsy, performed 20 years

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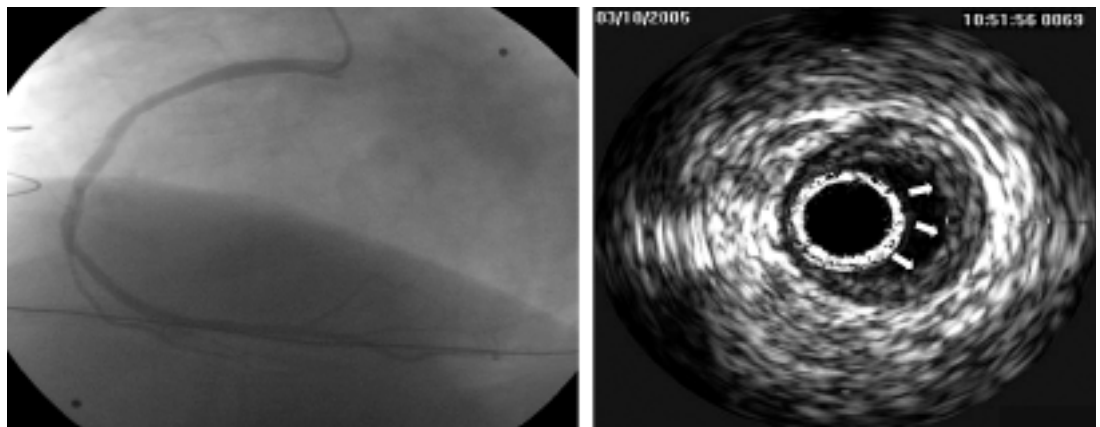


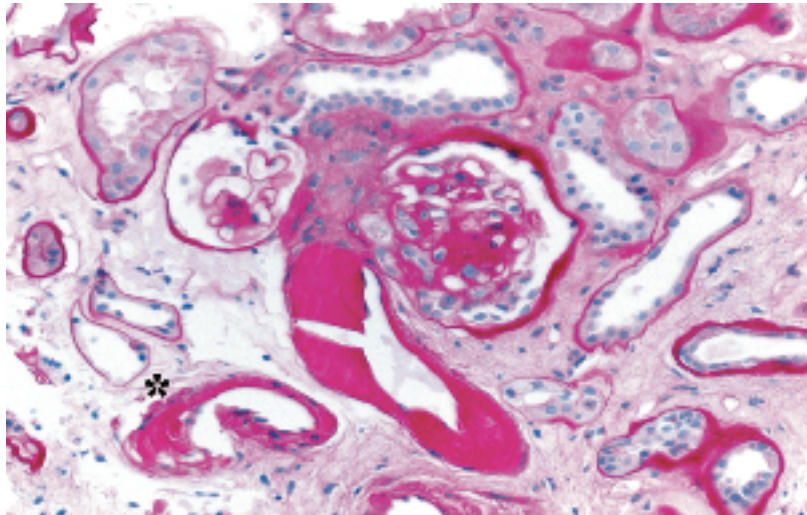
Figure 1
 The figure shows selective coronary-angiography of the right artery with the corresponding intravascular ultrasound (IVUS), both performed twenty years after cardiac transplantation. Coronary angiography and IVUS show mild stenoses (arrows) which may be associated with either graft vasculopathy and/or de novo atherosclerotic plaques. Left coronary artery (not shown in the figure) presented a similar pattern.

¹ This report is dedicated to Norman Shumway who allowed to start many heart transplant programmes in the world.

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Figure 2

Figure 2 shows renal biopsy, performed twenty years after HTX, indicating arteriopathy characteristic for calcineurin inhibitor toxicity (cyclosporine) (*). It also shows severe unspecific arteriopathy and a glomerulus with increase of mesangial matrix.



after HTX, showed typical changes with arteriopathy characteristic for calcineurin inhibitor toxicity (cyclosporine) (fig. 2). This case illustrates how long-term survival after HTX is possible with excellent quality of life with

only mild coronary vasculopathy and moderate to severe renal insufficiency.

Key words: cardiac transplantation; graft vasculopathy