A Reliable Test to Detect Impending Pump Failure during Long-Term support on the Novacor®N100 Left Ventricular Assist System

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Abstract:
The Durastudy is a new surveillance protocol to detect impending pump failure in Novacor® N100 Left Ventricular Assist systems implanted for the long term. Our patient, a 54-year-old man with a history of dilated cardiomyopathy and contraindications for heart transplantation, received a Novacor pump in May 1995 and did not experience sustainable ventricular recovery during the subsequent 3 years. After more than 3 years of support, symptoms of pump wear were detected in this patient, through application of the Durastudy protocol. This enabled us to electively exchange the pump at 3.8 years. Our patient remained in New York Heart Association class I until he died in July 1999 of causes unrelated to the pump, after some 1,514 days of support. This, we believe, still constitutes a world record.

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