Figure S1. Cardiopulmonary exercise test room layout.

Top left corner - MES START 2000 M ergospirometer. Bottom left corner - Philips Cx50 portable ultrasound system. Bottom right corner - Ergometrics ER 900 L reclining ergometer. Top right corner – HeartWare pump monitor and a Canon EOS 600D camera on a focusing rack.
Figure S2. Transthoracic echocardiography, parasternal long-axis view, zoom on the LV output tract, sample patient, AV opening ratio.

a – opened AV after ECG QRS complex. b – closed AV after ECG QRS complex.

AV – aortic valve, ECG – electrocardiogram, LV – left ventricle
Figure S3. Screenshots of the HeartWare pump monitor during CPETs, sample patient.

a – fixed speed CPET baseline LVAD parameters. b – fixed speed CPET peak VO$_2$ LVAD parameters. c – modified speed CPET baseline LVAD parameters. d – modified speed CPET peak VO$_2$ LVAD parameters.

CPET – cardiopulmonary exercise test, LVAD – left ventricle assist device, VO$_2$ – oxygen consumption