DEVICE THERAPY

Continuous-flow LVAD improves quality of life

According to Dr Joseph Rogers of the HeartMate II trial, "a large portion of the heart failure population would be willing to trade a significant amount of their longevity for improved quality [of life]." He and his colleagues have now shown that the functional capacity and quality of life of a group of patients with advanced heart failure improved after implantation of a continuous-flow left ventricular assist device (LVAD).

The HeartMate II® LVAD (Thoratec Corporation, Pleasanton, CA) is a new-generation LVAD with a rotary pump rather than a pulsatile pump. The HeartMate II investigators analyzed data from patients with advanced heart failure at baseline and after implantation of this device. The impact of continuous-flow LVADs on long-term exercise performance and quality of life had not previously been assessed in detail in a large number of patients.

In the study, 281 patients had NYHA functional class IV symptoms and were high-priority candidates for heart transplantation, whereas 374 had NYHA functional classes IIIB and IV symptoms, were not candidates for transplantation, and were refractory to medication. The first group had been involved in the 'bridge to transplant' trial and had a 6 month follow-up; the second group had been involved in the 'destination therapy' trial and had a 24 month follow-up.

Functionality (measured via NYHA functional class, 6 min walking distance, and patient activity scores) and quality of life (assessed with two questionnaires of quality of life related to heart failure) improved in both treatment groups. Within 3 months of implantation, more than 70% of the patients had minimal or no symptoms of heart failure. "These beneficial changes were sustained throughout the duration of the observation," highlights Dr Rogers. The quality of life after continuous-flow LVAD implantation will now be assessed in patients with less-severe heart failure.

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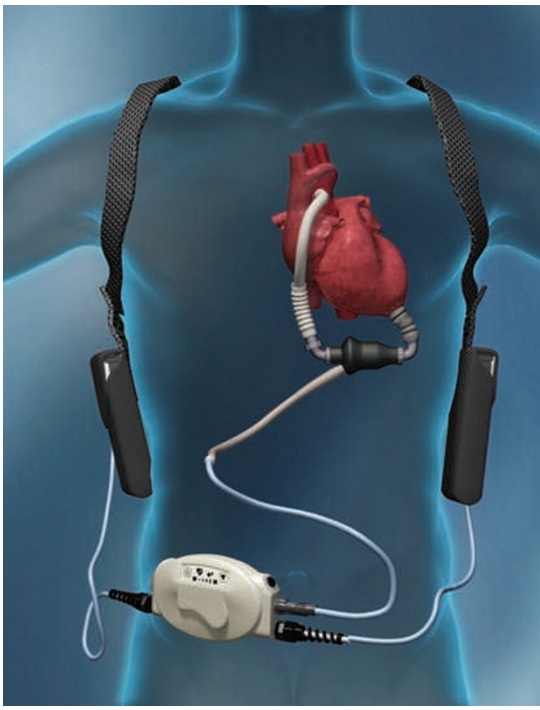

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Original article Rogers, J. G. *et al.* Continuous flow left ventricular assist device improves functional capacity and quality of life of advanced heart failure patients. *J. Am. Coll. Cardiol.* **55**, 1826–1834 (2010)