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HEART FAILURE

VAGAL STIMULATION IN PATIENTS WITH HF

Enhancement of parasympathetic tone has been suggested to have potential clinical benefit in patients with heart failure (HF). The NECTAR-HF trial was the first sham-controlled, randomized study to be designed to assess whether patients with HF benefit from vagal nerve stimulation (VNS). Results from this study have now been published in the *European Heart Journal* in association with the ESC Congress 2014. Data from a previous study of direct VNS in patients with HF and left ventricular systolic dysfunction suggested benefits in quality of life, exercise capacity, and left ventricular remodelling.

Patients who met the inclusion criteria received the VNS implant and were randomly allocated in a 2:1 ratio to the therapy ($n=63$) or control ($n=32$) groups; patients in the therapy group received active stimulation, whereas the implanted device of patients in the control group remained off. After an initial visit for baseline assessment, patients received three stimulation titrations within 30 days.

Occurrence of the primary end point (changes in left ventricular end-systolic diameter at 6 months after the 30-day period of stimulation) was not significantly different between the two groups (–0.04 ± 0.25 cm in the therapy group compared with –0.08 ± 0.32 cm in the control group). Additional echocardiographic parameters were also not affected by VNS, but patients in the therapy group reported significant improvements in quality of life, as assessed by the Minnesota Living with Heart Failure Questionnaire ($P=0.049$), NYHA class ($P=0.032$), and the SF-36 Physical Component ($P=0.016$).

Despite failing to demonstrate effects on the primary and most secondary end points, "results from the NECTAR-HF trial should not dissuade investigators from continuing with their trials," write A. John Camm and Irina Savelieva (St George's, University of London, UK) in an editorial that accompanied the study publication. Two other trials (INOVATE-HF and ANTHEM-HF) are underway to assess the effect of VNS in patients with HF using different stimulators and outcome measures from those in the NECTAR-HF study.

João H. Duarte

Original article Zannad, F. *et al.* Chronic vagal stimulation for the treatment of low ejection fraction heart failure: results of the neural cardiac therapy for heart failure (NECTAR-HF) randomized controlled trial. *Eur. Heart J.* doi:10.1093/eurheartj/ehu345