**BAROREFLEX STIMULATION FOR THE TREATMENT OF HEART FAILURE**

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Autonomic dysregulation is a feature of heart failure (HF) characterized by sustained increase of sympathetic drive and by withdrawal of parasympathetic activity. Both maladaptations are independent predictors of poor long-term outcome in patients with HF. Considerable evidence supports the use of pharmacologic agents such as beta-blockers to partially inhibit sympathetic activity as an effective long-term therapy for HF. In contrast, modulation of parasympathetic activation as potential therapy for HF has received only limited attention. Recent pre-clinical animal studies provided support for the possible use of baroreflex electrical stimulation, also known as baroreflex activation therapy (BAT), as a long-term therapeutic approach for the treatment of patients with chronic HF. In addition to exploring the effects of chronic BAT on left ventricular (LV) function and chamber remodeling, these studies also addressed the effects of long-term BAT on ventricular arrhythmias and on potential modifiers of the HF state that include maladaptations of both the nitric oxide and beta-adrenergic receptor signal transduction pathways. The results of the pre-clinical studies conducted to date have shown that in dogs with advanced HF, monotherapy with BAT improves global LV systolic and diastolic function and partially reverses LV remodeling both globally and at cellular and molecular levels. In addition BAT therapy was shown to markedly increase the threshold for lethal ventricular arrhythmias in dogs with chronic HF. These benefits of BAT support the continued exploration of this therapeutic modality for treating patients with chronic HF and those with increased risk of sudden cardiac death.