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Introduction

To establish the treatment strategy for heart failure (HF), progress in the pathophysiological elucidation of HF is important. Recent studies revealed the existence of a cross-talk, which occurs through various humoral factors, between cardiomyocytes and cardiac sympathetic nerves (CSNs). Axon growth, denervation, and functional alteration of sympathetic nerves have been noted in HF cases. By using molecular biological approaches, a new adaptation mechanism involving the autonomic nervous system (ANS) has been developed for HF. In this review, we focus on the concept of cardiac autonomic nerve plasticity in HF.

Anatomy and Function of the CSNs and their Alterations in Diseased Heart

The heart is abundantly innervated, and its performance is tightly controlled by both sympathetic and parasympathetic efferent nerves.

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