Electrophysiology of Pulmonary Veins

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摘要

Abstract

Pulmonary veins were found to be important foci for the genesis and maintenance of atrial fibrillation. Morphological studies have demonstrated the presence of complex anatomic structures and different types of cardiomyocytes in pulmonary veins. Numerous studies have suggested that the combination of reentrant and nonreentrant mechanisms (automaticity and triggered activity) are the underlying arrhythmogenic mechanisms of atrial fibrillation initiation from the pulmonary veins. Electropharmacological studies further indicated that pulmonary veins contained distinct arrhythmogenic activity. Several experimental models have been used to study the pulmonary vein electrical activity and demonstrate the precipitating factors for enhancing the pulmonary vein arrhythmogenic activity. The aim of this review article is to provide a critical overview of the current understanding of the basic and clinical electrophysiology of pulmonary veins and to underscore the importance of future research in this field.