

Electrophysiological characteristics of junctional rhythm during ablation of the slow pathway in different types of atrioventricular nodal reentrant tachycardia.

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摘要

Abstract

BACKGROUND: Junctional rhythm (JR) is commonly observed during radiofrequency (RF) ablation of the slow pathway for atrioventricular (AV) nodal reentrant tachycardia. However, the atrial activation pattern and conduction time from the His-bundle region to the atria recorded during JR in different types of AV nodal reentrant tachycardia have not been fully defined. **METHODS:** Forty-five patients who underwent RF ablation of the slow pathway for AV nodal reentrant tachycardia were included; 27 patients with slow-fast, 11 patients with slow-intermediate, and 7 patients with fast-slow AV nodal reentrant tachycardia. The atrial activation pattern and HA interval (from the His-bundle potential to the atrial recording of the high right atrial catheter) during AV nodal reentrant tachycardia (HA(SVT)) and JR (HA(JR)) were analyzed. **RESULTS:** In all patients with slow-fast AV nodal reentrant tachycardia, the atrial activation sequence recorded during JR was similar to that of the retrograde fast pathway, and transient retrograde conduction block during JR was found in 1 (4%) patient. The HA(JR) was significantly shorter than the HA(SVT) (57 ± 24 vs 68 ± 21 ms, $P < 0.01$). In patients with slow-intermediate AV nodal reentrant tachycardia, the atrial activation sequence of the JR was similar to that of the retrograde fast pathway in 5 (45%), and to that of the retrograde intermediate pathway in 6 (55%) patients. Transient retrograde conduction block during JR was noted in 1 (9%) patient. The HA(JR) was also significantly shorter than the HA(SVT) (145 ± 27 vs 168 ± 29 ms, $P = 0.014$). In patients with fast-slow AV nodal reentrant tachycardia, retrograde conduction with block during JR was noted in 7 (100%) patients. The incidence of retrograde conduction block during JR was higher in fast-slow AV nodal reentrant tachycardia than slow-fast ($7/7$ vs $1/11$, $P < 0.01$) and slow-intermediate AV nodal reentrant tachycardia ($7/7$ vs $1/27$, $P < 0.01$).

CONCLUSIONS: In patients with slow-fast and slow-intermediate AV nodal reentrant tachycardia, the JR during ablation of the slow pathway conducted to the atria through the fast or intermediate pathway. In patients with fast-slow AV nodal reentrant tachycardia, there was no retrograde conduction during JR. These findings suggested there were different characteristics of the JR during slow-pathway ablation of different types of AV nodal reentrant tachycardia..

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