Electrophysiologic characteristics of different ectopic rhythms during slow pathway ablation in patients with atrioventricular nodal reentrant tachycardia.

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摘要

Abstract

The presence of ectopic rhythm has been considered to be the most important marker for successful slow pathway ablation, but the details of different ectopic rhythms have not been well described. This study included 83 consecutive patients with typical AV node reentrant tachycardia who underwent slow pathway ablation. The interval between the atrial signals of the His bundle electrogram and the distal ablation catheter [A(H)-A(Ab)], and the interval between the atrial components of the distal ablation catheter and the ostium of coronary sinus catheter [A(Ab)-A(CSos)] were measured. One hundred episodes of ectopic rhythm occurred with 81 (81%) successful applications. There are two different origins and three activation sequences of ectopic rhythms, including HIS rhythm (78 applications, the earliest atrial activation in the His bundle electrogram), CSos rhythm (6 applications, the earliest atrial signal in the coronary sinus ostium electrogram) and CSos preceding HIS (CSosHIS) rhythm (16 applications, the atrial activation sequences changing from CSos to HIS rhythm). The CSos rhythm had a shorter mean cycle length (445 ± 81 vs. 511 ± 132 vs. 579 ± 140 ms, $p < 0.05$), a shorter [A(Ab)-A(CSos)] interval (–2.5 ± 9.8 vs. 14.1 ± 11.2 vs. 12.8 ± 8.4 ms, $p < 0.05$) and a lower success rate (33% vs. 84% vs. 94% $p < 0.05$) than HIS rhythm and CSosHIS rhythm. Otherwise, the mean cycle length of ectopic rhythm was significant shorter in successful than in failed ablation (506 ± 135 vs. 559 ± 118 ms, $p = 0.04$). In conclusion, we found two different origins and three activation sequences of ectopic rhythms. CSos rhythm had a lower success rate in ablation of slow pathway, thus it was a poor marker for successful ablation.

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