

Is 8-mm more effective than 4-mm tip electrode catheter for ablation of typical atrial flutter?

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摘要

Abstract

BACKGROUND: The prospective, randomized study comparing 4- with 8-mm tip electrodes for radiofrequency linear ablation of typical atrial flutter is not available. **METHODS AND RESULTS:** A total of 104 consecutive patients with typical atrial flutter were randomly assigned to undergo radiofrequency linear ablation using a 4- (Group I, n=54) or 8-mm tip electrode (Group II, n=50) catheter (temperature-control model, preset 70 degrees C). If complete bidirectional isthmus block could not be achieved after 5 pulses, the ablation catheter was changed to the other type; the maximal radiofrequency pulse number was limited to <10 pulses. Complete or incomplete isthmus conduction block was assessed by activation sequence in a multielectrode Halo catheter during low lateral right atrial and proximal coronary sinus pacing. Before shifting to the other catheter type, the 8-mm electrode catheter achieved higher complete isthmus block rate (92% versus 67%, $P<0.05$) with fewer pulses (2 ± 1 versus 3 ± 1 , $P<0.05$), shorter procedure time (24 ± 15 versus 31 ± 12 minutes, $P<0.05$), and shorter fluoroscopic time (14 ± 10 versus 23 ± 15 minutes, $P<0.05$). After 5 failed ablation pulses, 12 (67%) of 18 patients in group I attained complete isthmus block by using an 8-mm tip catheter, but none of 4 patients in group II achieved complete block by changing to a 4-mm tip catheter. **CONCLUSIONS:** The 8-mm tip electrodes are more effective than the standard 4-mm length electrodes in linear ablation for typical atrial flutter. This clinical benefit may be of particular value for some patients with broad and/or thick isthmus.