Ablation of typical atrial flutter guided by the paced PR interval on the surface electrocardiogram: a proof of concept study

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 4598686
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Year 2019
Title Ablation of typical atrial flutter guided by the paced PR interval on the surface electrocardiogram: a proof of concept study
Journal Europace : European pacing, arrhythmias, and cardiac electrophysiology : journal of the working groups on cardiac pacing, arrhythmias, and cardiac cellular electrophysiology of the European Society of Cardiology
Volume 21
Number 11
Pages / **Article-Number** 1750-1754
Keywords Atrial flutter; Cavotricuspid isthmus; Electrical mapping; Novel concept; Radiofrequency catheter ablation

We aimed to assess the novel concept of using the paced PR interval (PRI) on the surface electrocardiogram (ECG) to prove trans-isthmus block after cavotricuspid isthmus (CTI) ablation for typical atrial flutter (AFl).; Consecutive patients with AFl underwent linear radiofrequency ablation of the inferior CTI (6 o'clock). After AFl termination and/or presumed completion of the CTI line, CTI block was proven by atrial pacing by the ablation catheter medial (5 o'clock) and lateral to the line (7 and 9 o'clock). Corresponding PRIs were measured on the surface ECG. CTI block was assumed, if a sudden increase in the PRI was observed by moving the pacing site from 5 to 7 o'clock, and if the latter was longer than at 9 o'clock. Afterwards, bidirectional CTI block was confirmed by differential pacing. Thirty-one patients (mean age 67 ś 16 years, 81% male) underwent CTI ablation, and 18/31 (58%) were in AFl at the time of ablation (cycle length 249 ś 31 ms). Successful CTI block as defined by the PRI method was achieved in 31/31 (100%), and the mean PRIs during pacing at 5, 7, and 9 o'clock were 203 ś 56 ms, 329 ś 70 ms, and 296 ś 66 ms, respectively. Cavotricuspid isthmus block was confirmed in all patients (100%) by coronary sinus pacing with a reversal of the local activation sequence lateral to the isthmus line.; The method of PRI analysis on the surface ECG to guide CTI ablation is easy to apply and highly accurate in confirming CTI block. This simple technique enables the novel concept of CTI ablation and proof of block with a single catheter.

Publisher OXFORD UNIV PRESS
ISSN/ISBN 1532-2092
edoc-URL https://edoc.unibas.ch/77029/
Full Text on edoc No;
Digital Object Identifier DOI 10.1093/europace/euz208
PubMed ID http://www.ncbi.nlm.nih.gov/pubmed/31384937
ISI-Number WOS:000498026800024
Document type (ISI) Journal Article