

# **Early recurrence of atrial fibrillation after external cardioversion.**

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摘要

## **Abstract**

Early recurrence of atrial fibrillation (AF) has been reported to occur in a significant number of patients after internal cardioversion. However, information about early recurrence of AF after external cardioversion has never been reported. The present study was conducted to investigate the clinical and electrophysiological characteristics of early recurrence of AF and its role in failure of cardioversion in patients with chronic AF. Methods and Results: The study included 50 consecutive patients, age  $69 \pm 9$ , with a history of chronic AF for more than 3 months duration and electrical cardioversion. They were divided into two groups according to the presence (group 1) or absence (group 2) of early recurrence of AF. There were 13 (26%) patients in group 1 and 37 (74%) patients in group 2. The age, gender, duration of AF, left ventricular function, left atrial dimension, and underlying heart disease were similar between group 1 and 2. Forty-five patients were successfully converted to sinus rhythm with a mean energy of  $158 \pm 57$  J. Among those who failed to be converted to sinus rhythm, 4 (80%) belonged to group 1 and 1 (20%) belonged to group 2. The early recurrences of AF were initiated with consecutive APDs; but the numbers of APD in the first 30 seconds after cardioversion were similar between group 1 and 2. However, the coupling interval of the second APD was shorter in group 1 than group 2 ( $188 \pm 22$  vs  $324 \pm 59$  ms,  $P = 0.003$ ). Nine of the 13 early recurrences were prevented by an increase of shock energy ( $n = 3$ ) or intravenous amiodarone infusion ( $n = 6$ ). There were no differences in duration of follow-up, recurrence rate, and time interval to recurrence between group 1 and group 2. Early recurrence of AF occurred in 26% of chronic AF patients who underwent external electrical cardioversion and was a major cause of failure in cardioversion. Early recurrence of AF was initiated by APDs with decreasing coupling intervals and could be prevented with an increase of shock energy or amiodarone.