I read with great interest the study by Reithmann and colleagues[1] concerning the efficacy of cavotricuspid isthmus ablation on the elimination of paroxysmal atrial fibrillation, as well as the editorial by Geelan and Brugada[2]. I do concur with the conclusions of the original study and the thoughtful comments of the editorial. It is, however, rather disappointing to see that the earliest study to point out the possibility of treating atrial fibrillation by flutter ablation, published as early as in 1996[3], has escaped the attention of the authors.

We have shown that patients without structural heart disease and a history suggestive of paroxysmal atrial fibrillation may have evidence of common atrial flutter triggering fibrillation episodes[3]. Should this be the case, this patient group may benefit by ablation of the flutter circuit. These patients usually present with episodes of both regular and irregular arrhythmias, suggesting supraventricular tachycardia and paroxysmal atrial fibrillation. Ambulatory electrocardiographic monitoring may reveal that atrial fibrillation is preceded by a narrow QRS complex tachycardia with characteristics of typical atrial flutter. At electrophysiology study, typical atrial flutter is inducible in all patients but is noted to spontaneously degenerate into flutter/fibrillation, with recording of flutter waves from the right atrium and typical fibrillation from the left atrium. Catheter ablation of the cavitricuspid isthmus eliminates the paroxysms of atrial fibrillation, particularly if the arrhythmia is not inducible following ablation[3-5].

The mechanism of prevention of atrial fibrillation by this ablation approach is not clear. Konings et al[3] have identified a subgroup of patients with atrial fibrillation in the context of normal atria, who demonstrated broad uniform fronts propagating in the right atrium, probably as part of a large circuit. We do not know whether ablation of the cavitricuspid isthmus area modified the background of atrial fibrillation itself or simply eliminates an important stimulus for the induction of atrial fibrillation in such patients groups. Apart from patients with flutter-fibrillation, patients with flutter-like organized activity around the tricuspid valve during atrial fibrillation may also benefit from such an approach[6]. It seems that interruption of the isthmus may be beneficial in broader patient groups with atrial fibrillation, and preliminary results suggest that the lesion does not appear to be proarrhythmic[7].

Atrial fibrillation, particularly in its paroxysmal form, is not a single entity; it comprises a variety of arrhythmogenic disorders which might be amenable to catheter ablation therapy. Our observations as well as others' underline the importance of full electrophysiological assessment of patients presenting with the clinical syndrome of paroxysmal atrial fibrillation.

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References


Clinical trials for conversion of recent onset atrial fibrillation must consider the role of digoxin

Clinical trials comparing the efficacy of amiodarone vs placebo in the conversion of recent onset atrial fibrillation have controversial results. While some series showed no difference between amiodarone and placebo[1-3], others, with higher doses of amiodarone or a longer period...