Management of tachycardia-induced cardiomyopathy due to atrial flutter

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I read with interest the article by David et al.\(^1\) regarding a case of recurrent tachycardia-induced cardiomyopathy secondary to typical atrial flutter.

I have some concerns regarding the management of the recurrences of atrial flutter and tachycardia-induced cardiomyopathy in this case. The authors’ choice of treatment involved DC cardioversion of the atrial flutter that was successful in restoring sinus rhythm, but was not curative and did not prevent recurrences of atrial flutter. Furthermore, the patient was not given an antiarrhythmic drug (e.g. amiodarone) to prevent recurrences post cardioversion. As a result the patient presented with a two further recurrences of atrial flutter and tachycardia-induced cardiomyopathy.

Although DC cardioversion is usually effective in restoring sinus rhythm in the acute setting, early catheter ablation should be recommended as curative treatment of typical atrial flutter in patients with tachycardia-induced cardiomyopathy after the first presentation. Cavotricuspid isthmus ablation is a well-established, relatively simple procedure with low risk of complications and a success rate 85–95\%.\(^2\)

The reasons for considering early catheter ablation are as follows. First, the recurrence rate of atrial flutter is high in patients with underlying structural heart disease and frequent paroxysmal recurrences can delay improvement in left ventricular function. Secondly, a previous study has shown that recurrence of tachycardia can lead to a precipitous rapid decline in left ventricular systolic function.\(^3\) Thirdly, this same study showed that recurrence of tachycardia-induced cardiomyopathy is associated with an increase in sudden death. Lastly, it is well known that left ventricular function does not completely normalize after the tachycardia is treated and patients can be left with residual LV dilatation.\(^4\) In summary, recurrence of tachycardia-induced cardiomyopathy is not benign.

Therefore, catheter ablation should be considered as early or first-line therapy in suspected patients with tachycardia-induced cardiomyopathy secondary to arrhythmias amenable to catheter ablation (typical atrial flutter, atrioventricular re-entry tachycardia, atrioventricular nodal re-entry tachycardia, atrial tachycardia and fascicular ventricular tachycardia). Potentially ‘curable’ tachycardias should be ablated early to prevent future recurrences of tachycardia-induced cardiomyopathy.

Conflict of interest: None declared.

References