

Persistent atypical atrial flutter after device closure of the atrial septal defect in a young man

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ABSTRACT

Atrial flutter is uncommon in young patients with uncorrected atrial septal defect (ASD). Although rare, it has been reported in the younger population following device closure of ASD/patent foramen ovale. We describe a case of persistent atypical atrial flutter following device closure of ASD in a young man and discuss the management strategy given the various underlying dilemmas.

Keywords: Arrhythmias, cardioversion, congenital heart disease

A 28-year-old asymptomatic man was found to have a right bundle branch block during a routine medical check-up. On further evaluation, he was found to have a large ostium secundum ASD with dilated right-sided chambers. His transesophageal echocardiographic examination revealed the defect to be 27 mm in diameter with adequate surrounding rims for device closure. He underwent successful closure of his ASD with an Amplatzer septal occluder (32 mm). There was no sustained ventricular/supraventricular arrhythmia noted during the procedure. Three weeks following the closure he complained of palpitations. His ECG showed atypical atrial flutter (AFL) with 2:1 atrioventricular (AV) conduction and a ventricular rate of 150/min [Figure 1]. Echocardiography showed the device to be in an appropriate position with no residual shunt. The right heart chambers showed partially reversed remodeling, and there was no evidence of any thrombus or pericardial effusion. The routine serum biochemistry and thyroid function tests were normal.

He was admitted and administered heparin and intravenous amiodarone (1 g over 24 h), which reduced the ventricular rate but did not restore the sinus rhythm. Subsequently, he was started on metoprolol succinate (50

mg twice a day) and dabigatran (150 mg twice a day). After 4 weeks, since the AFL persisted, it was decided to give him a trial with flecainide which was started initially in the dose of 50 mg twice daily, and later increased to 100 mg twice daily. Over the next 2 months, while his pulse rate was within the normal range, the AFL persisted. Hence, flecainide was stopped, and oral amiodarone was instituted. Two months later, he still complained of palpitations on effort; his ECG continued to show AFL at the atrial rate of 300/min, with varying AV conduction and a ventricular rate of 80/min [Figure 2]. Given the adverse effects of long-term amiodarone therapy, it was decided to go back to the original regimen of metoprolol succinate in the dose of 50 mg twice daily. He continued to remain on dabigatran throughout this period. During all this time, cardioversion was not attempted in view of the possibility of device embolization during the delivery of the shock.

After 6 months following the device closure since the AFL persisted, it was presumed to be safe to convert him electrically. He was subjected to transesophageal echocardiography, which confirmed the device to be

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can be safely undertaken after 6 months even with larger devices.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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