Very Late Dislocation of an AMPLATZER Septal Occluder Device Suspected Thanks to a Recent Onset of Right-Axis Deviation

Gregory Dendramis, MD,a Claudia Paleologo, MD,b Davide Piraino, MD,a Stefano Augugliaro, MDa

Data on late complications after percutaneous closure of atrial septal defects (ASDs) are still sparse. This is the first report of a very late dislocation of an AMPLATZER septal occluder (ASO) device (St. Jude Medical, St. Paul, Minnesota) 14 years after placement.

A 74-year-old Caucasian woman was admitted to our department for a syncopal event preceded by palpitations. Her medical history is notable for a large (~32 mm) ostium secundum ASD that was successfully percutaneously closed with a 34-mm ASO ~14 years ago and without apparent complications. The electrocardiogram (Figure 1A) and the transthoracic echocardiogram obtained 3 months ago were unchanged compared with the previous ones.

At admission, the electrocardiogram showed atrial fibrillation, 122 beats/min, right-axis deviation of ~120°, and a single ventricular ectopic beat (Figure 1B). The transthoracic echocardiogram showed an evident partial dislocation of the ASO into the left atrium, with only a part of the ASO hooked at the basal part of the defect border and with a systolic/diastolic left-to-right interatrial shunt flow (pulmonary/systemic flow ratio >2.5). Also present were low mitral regurgitation and severe tricuspid regurgitation with pulmonary artery systolic pressure of 50 mm Hg (Figures 1C to 1H, Online Videos 1 and 2).

Because of the imminent risk of ASO detachment and death, the heart team did not perform transesophageal echocardiography, and on the basis of the transthoracic echocardiographic data, the patient was transferred to the Division of Cardiac Surgery for a surgical removal of the device and subsequent closure of the ASD. To date, the patient is in good health.

Our report emphasizes the importance of a careful assessment of the size and borders of the ASD before implantation of an appropriately sized ASO device. A careful clinical and electrocardiographic evaluation is always fundamental to confirm the clinical suspicion and to avoid loss of time in these cases at high risk of sudden death. Constant follow-up with periodic transthoracic echocardiograms, especially in patients with large ASDs, is highly recommended (1).

REPRINT REQUESTS AND CORRESPONDENCE: Dr. Gregory Dendramis, Division of Cardiology, University Hospital “Paolo Giaccone,” Via Del Vespro 127, CAP 90127 Palermo, Italy. E-mail: gregorydendramis@libero.it.
**FIGURE 1** Patient’s Electrocardiograms and Transthoracic Echocardiogram

(A) Previous electrocardiogram showing sinus tachycardia, 110 beats/min, normal QRS axis, left atrial enlargement, and left bundle branch block. (B) Electrocardiogram at admission showing atrial fibrillation, 122 beats/min, right-axis deviation of −120°, and a single ventricular ectopic beat. (C) Transthoracic echocardiogram showing partial dislocation of the AMPLATZER septal occluder (ASO) into the left atrium (arrow) with only a part of the ASO hooked at the basal part of the defect border (Online Video 1). (D) Enlarged detail of the dislocation of the ASO into the left atrium. (E) Four-chamber view showing left-to-right interatrial shunt flow (Online Video 2). (F) Parasternal long-axis view showing dilated right ventricular outflow tract and protrusion of the basal part of the ASO into the left atrium (arrow). (G) Subcostal view of the atrial septal defect (ASD) with the displaced ASO with evident shunt flow. (H) Continuous-wave Doppler across the ASD showing systolic and diastolic left-to-right interatrial shunt flow.

**REFERENCE**


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**APPENDIX** For supplemental videos, please see the online version of this article.