Successful Operation of Giant Thrombus Formation One Year after Percutaneous Closure of an Atrial Septal Defect with an Amplatzer Septal Occluder

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Introduction: Although a number of transcatheter closure devices have been developed the most commonly used device is the Amplatzer® Occluder worldwide. The overall incidence of complications associated with these devices has been reported to be between 6–11%. Of these complications, thrombus formation that was usually observed 4 weeks after the procedure was reported as 1.2% in ASD patients. Herein, we report a late presentation of a giant thrombus formation on the left atrial disc of the device presenting 1 year after device implantation.

Case Report: A 17-year-old patient underwent a TEE-guided transcatheter closure of the atrial septal defect under general anesthesia using a 18 mm Amplatzer® Septal Occluder without residual shunt. Aspirin 300 mg/day had been stopped after 6 months. At the 1-year follow-up, he was evaluated with transthoracic echocardiography which showed a left atrial thrombus attached to the ASD closure device. The diameter of thrombus was 14 x 62 mm. He was taken to surgery for removal of the thrombus and the device. The surgical approach was achieved via a median sternotomy and institution on cardiopulmonary bypass. After right atriotomy, well endothelialized occluder device was seen and excised with large thrombus. There was no device fracture or dislocation. The thrombus and device explanted and sent to pathological examination. The novel created atrial septal defect was closed by pericardial patch. The patient had an uneventful recovery and the studies continues on the etiology of hypercoagulability states.

Conclusion: To our knowledge, this is the first report of late thrombus formation associated with Amplatzer Septal Occluder device. It was emphasized that the patients should be followed-up longer periods after device closure in terms of thrombus formation.