Thrombus formation on an Amplatzer closure device after left atrial appendage closure

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A 51-year-old female underwent a percutaneous closure of the left atrial appendage with a 28-mm Amplatzer Cardiac Plug (ACP) (St Jude Medical). When she was 8 years old, she underwent a surgical closure of an atrial septal defect. She developed paroxysmal atrial fibrillation at the age of 32. When she was 48 years old, she had an ischaemic cerebellar stroke. Since then, she has been treated with coumadin. At routine follow-up, cerebral MRI microbleeds were observed, constituting a neurological contraindication for coumadin treatment.

Subsequently, she was scheduled for a percutaneous left atrial appendage closure. This procedure was done in November 2011 without any complication and resulting in a correct and stable position of the device (Panels 1 and 2). She was treated with aspirin 80 mg daily and clopidogrel 75 mg daily. There were no complications and she was discharged the day after the procedure. Our patient has shown good medical compliance. At the 90-day follow-up, a control transoesophageal echocardiography was done. A very large and mobile thrombus on the connector pin of the device was seen (Panel 3). Surgical removal of the left atrial appendage including the closure device was performed 2 days later. A large mobile thrombus was seen on the connector pin of the disc (Panel 4). Laboratory results did not show any thrombophilic risk factors.

The connector pin of the Amplatzer device may be thrombogenic despite the dual platelet therapy as recommended. This may have implications for the device design in the future and/or an antithrombotic therapy protocol. We think that future studies with long-term follow-up documenting the safety for implantation of an Amplatzer Cardiac Plug closure device should be encouraged.