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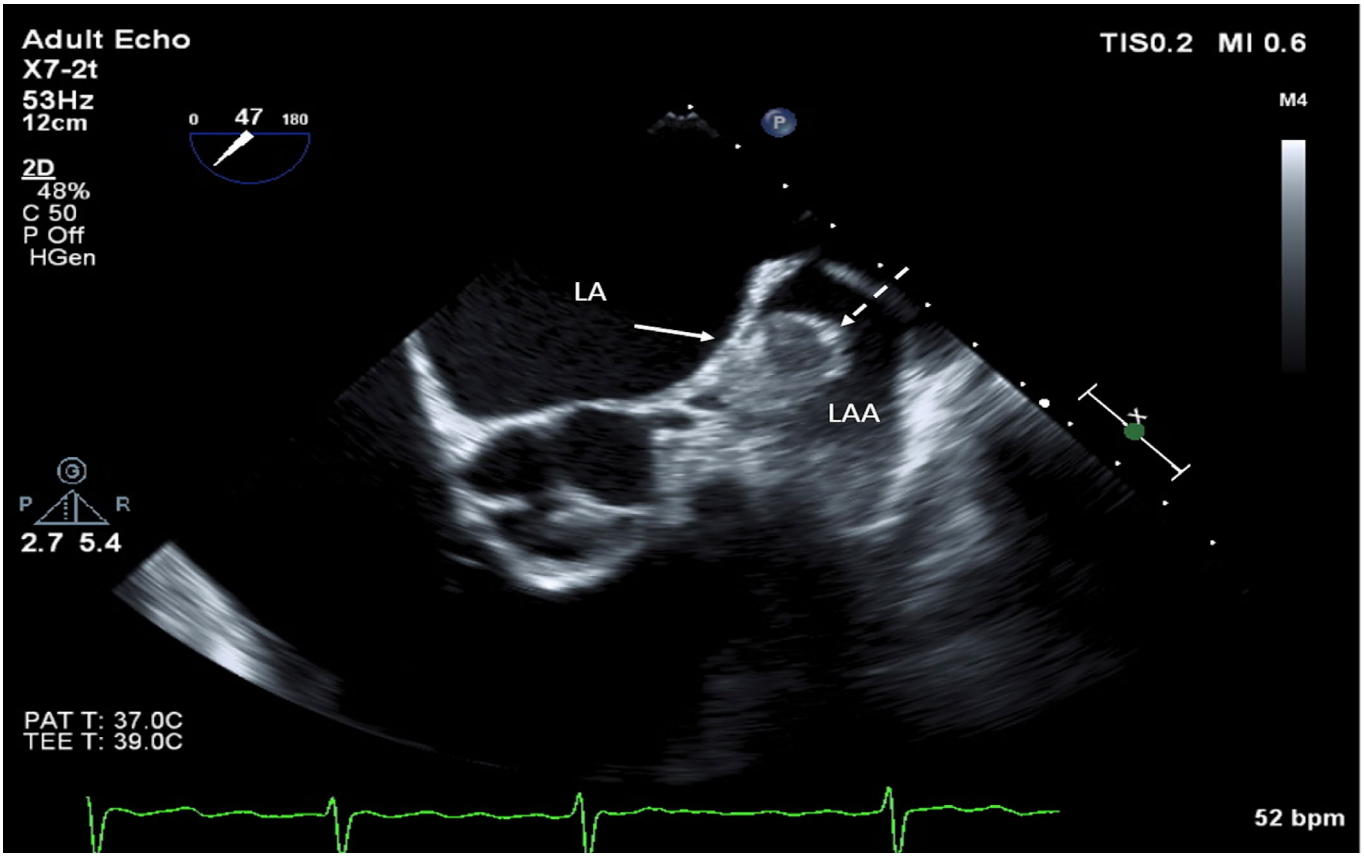
Clinical Image

Title: Left Atrial Appendage Thrombus on an Amplatzertm Cardiac Plug Device

Giovanni Davogustto[1] and Rajeev Ruben Fernando[2]

[1]Department of Internal Medicine, University of Texas Health Science Center at Houston, Houston, Texas

[2]Division of Cardiology, Department of Internal medicine, University of Texas Health Science Center at Houston, Houston, Texas



The left atrial appendage (LAA) is an embryonic remnant of the left atrium (LA) with variable shape, located in the atrio-ventricular sulcus. It communicates with the LA through an oval ostium between the left superior pulmonary vein and the left ventricle. In patients with atrial fibrillation (AF) and high risk of cardio-embolic stroke, oral anticoagulation (OAC) is the gold standard of therapy. However, there is a subset of patients in whom long term OAC is contraindicated, intolerable or non-feasible due to poor compliance. Since 90% of embolic strokes in patients with non-valvular AF originate from a thrombus in the LAA, the hypothesis of stroke prevention with amputation or obliteration of the LAA was developed. Several devices were developed to achieve this goal one of them being the Amplatzer cardiac plug (ACP), delivered percutaneously with transeptal access to the LA. The picture shown is a short axis of the aortic valve at midesophageal level on a transesophageal echocardiogram of a patient who underwent ACP placement. A thrombus (dashed arrow) is evidenced emerging from the ACP device (arrow) within the LAA. In animal models, endothelialization of ACP was achieved by 90 days, based on this observation we recommend at least 3 months of anticoagulation when possible after device placement to decrease risk of device thrombus formation while allowing endothelialization of the device to occur. Although a promising approach, clinicians should take into account that as a foreign body inside the heart, these devices may trigger the formation of new thrombus in the LA, which may itself be the source of cardioembolic strokes. Well-designed clinical trials are still required to conclude the ideal patients that will benefit from these devices.

***Corresponding author:** *Giovanni Davogustto, Department of internal medicine, University of Texas Health Science Center at Houston, 6431 Fannin Street, MSB 1.134, Houston, Texas 77030, Tel: 405-365-8185; Fax: 713-500-6530; E-Mail: giovanni.e.davogustto@uth.tmc.edu*