A 70-year-old male with paroxysmal atrial fibrillation, hypertension, and diabetes (CHADS2 score of 2) was enrolled as a first candidate in the United States for an Amplatzer Cardiac Plug (ACP) occlusion device for the left atrial appendage (LAA). The study was approved by the FDA and initiated under a feasibility phase to be followed by an expanded pivotal phase. The initial screening included transesophageal echocardiogram (TEE) that showed an adequate left atrial appendage (LAA) orifice and landing zone, as shown in Figure 1.

He underwent successful placement of the ACP via the transseptal approach without any complications. Figure 2 demonstrates the contrast fluoroscopic image at the time of deployment of the ACP with the catheter tip at the orifice of the LAA. Figure 3 shows the fluoroscopic image of the ACP after deployment, with lobe (thin arrow) and disc (thick arrow) of the ACP in the LAA. A transthoracic echocardiogram was performed the next day as per protocol. Figures 4 and 5 are the apical four-chamber and two-chamber views, respectively, showing the right ventricle (RV), right atrium (RA), and left ventricle (LV); there was concern of device (arrow) migration into the left atrium (LA). The device was found to be securely placed in the LAA under fluoroscopy similar to Figure 3. A TEE at 45 days after ACP placement demonstrated the device to be well seated, as shown in Figure 6, with no evidence of color Doppler into the LAA.

As more of these devices will be implanted in the future, it is very important to become aware of the appearance of these devices using different imaging modalities to avoid misinterpretation.
Figure 1: Transesophageal echocardiogram (TEE) showing an adequate left atrial appendage (LAA) orifice (thick arrow-line between left upper pulmonary vein (LUPV) ridge and left circumflex artery (LCX)) and landing zone (thin arrow-distance between the point 10 mm below the pulmonary vein ridge on superior edge and the point 2–5 mm below the left circumflex artery on inferior edge of LAA).
Figure 2: The contrast fluoroscopic image at the time of deployment of the Amplatzer Cardiac Plug with the catheter tip at the orifice of the left atrial appendage.
Figure 3: The fluoroscopic image of the Amplatzer Cardiac Plug (ACP) after deployment, with lobe (thin arrow) and disc (thick arrow) of the ACP in the left atrial appendage.
Figure 4: A Transthoracic echocardiogram performed next day per protocol. The apical four chamber view showing the right ventricle (RV), right atrium (RA), left ventricle (LV) raised a concern of device migration into the left atrium (LA).
Figure 5: A Transthoracic echocardiogram performed next day per protocol. The apical two chamber view showing the left ventricle (LV) raised a concern of device migration into the left atrium (LA).
Figure 6: A Transesophageal echocardiogram (TEE) at 45 days post ACP placement demonstrates the device to be well seated, with no evidence of color Doppler into the LAA.