

CARDIOVASCULAR FLASHLIGHT

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Refractory cardiogenic shock in a senile atrial fibrillation patient after left atrial appendage occlusion

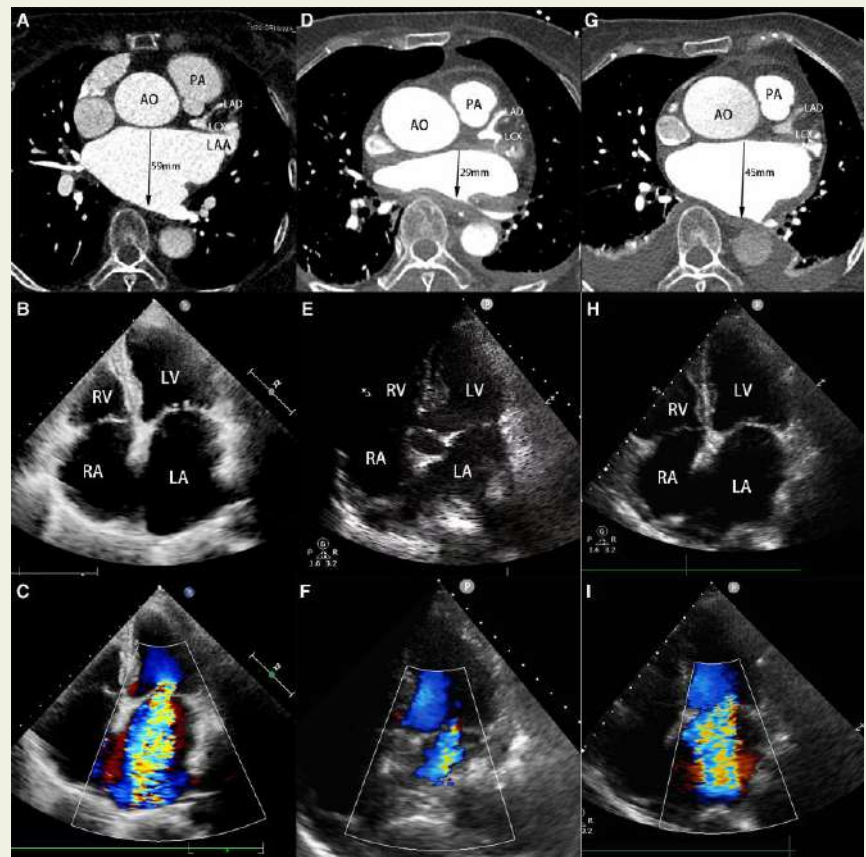
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An 81-year-old woman was admitted to our hospital for left atrial appendage occlusion (LAAO) due to atrial fibrillation with high risk of stroke and bleeding. Cardiac CTA (Panel A) and echocardiography (Panels B and C) showed an enlarged left atrium (LA) and left ventricle (LV) with severe mitral regurgitation (MR) and a large LAA with an ostium diameter of 32 mm. The LAA was successfully occluded with a 28-mm umbrella/34-mm cover LAMbre device (LifeTech Scientific, Shenzhen, China). After 3 min, the patient had nausea and vomiting, accompanied with severe hypotension (60/40 mmHg). Cardiac tamponade, compression of coronary arteries was excluded by intracardiac echography and coronary artery angiography. After 1 h, the blood pressure gradually increased, though with a reduced pressure difference (130/110 mmHg). She was visibly pale and her extremities were clammy. An emergency CTA and echocardiography failed to show a retroperitoneal hematoma but showed a dramatic reduction of LA and LV size with mild MR (Panels D–F, [Supplementary material online, Videos S1 and S2](#)). The patient displayed recurrent hypotensive episodes with a duration of 30 min and interval time of 2–4 h. Response was refractory to vasopressors and fluids. Subsequently, the duration and frequency of hypotension gradually decreased. After 3 days, the serum lactate level returned to normal from 8.8 mmol/L. On day 5, the blood pressure was stable, with normal pressure difference (120/50 mmHg). CTA and echocardiography showed increased LA and LV size and severe MR (Panels G–I, [Supplementary material online, Videos S3 and S4](#)). This clinical case indicates that LAAO may result in a hemodynamic change through the reduction of LV preload in senile patients with a large LAA. However, the heart may accommodate this hemodynamic change within a few days, through enlarging itself.



[Supplementary data](#) is available at *European Heart Journal* online.

Conflict of interest: None declared.

Data availability

The datasets used during the current study are available from the corresponding author on reasonable request.

Ethics approval and consent to participate: This study was conducted in accordance with the declaration of Helsinki. This study was conducted with approval from the Ethic committee of West China Hospital, Sichuan University.

Consent for publication: Written informed consent to publish the clinical details and images of the patient was obtained.