An 86-year-old woman experienced hypoxia with right-to-left flow across an iatrogenic atrial septal defect after deployment of a left atrial appendage closure device. Emergent closure of the defect was performed with an atrial septal occluder device with resolution of hypoxia. (Level of Difficulty: Intermediate.) (J Am Coll Cardiol Case Rep 2022;4:1053–1055) © 2022 The Authors. Published by Elsevier on behalf of the American College of Cardiology Foundation. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
within 45 days of the procedure. Oxygen desaturation related to right-to-left shunting, however, is a strong indication for urgent iASD closure. Patients with underlying pulmonary hypertension can be susceptible to right-to-left shunting caused by elevated right atrial pressure. In this case, the causal relationship between the hypoxia and the iASD was supported by the improvement in oxygenation with occlusion of the defect. The use of existing patent foramen ovale (PFO) or atrial septal defect (ASD) has been shown to be effective for transseptal access for LAAC. In these reported cases, Amplatzer LAAC devices were used, and the same sheath could be used for PFO or ASD closure. Although that was done for elective reasons in these reports, this approach of LAAC and simultaneous PFO or ASD closure did not increase the rates of procedural complications.

When LAAC platforms of different brands are used, as in this case, maintaining left atrial access across the iASD with a long wire before sheath removal should be considered in patients at risk for right-to-left shunting, such as those with severe pulmonary hypertension. Detection of right-to-left

**FIGURE 1** Intraprocedural TEE

(A) 3-dimensional color view and (B) multiplane view of interatrial septum with right-to-left flow. (C) Catheter across iatrogenic atrial septal defect (ASD) occludes right-to-left flow. (D) Multiplane image of interatrial septum showing ASD closure device with no residual shunt. (E) 3-dimensional image of left atrium showing positioning of ASD closure device (solid arrow) and left atrial appendage closure device (dashed arrow). TEE = transesophageal echocardiography.
iASD flow and oxygen desaturation would prompt consideration for closure, and the retained wire would speed delivery of care. This would avoid the difficulty and delay of re-crossing the defect with a new wire.

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**KEY WORDS** 3-dimensional imaging, atrial septal defect, echocardiography, pulmonary hypertension

**APPENDIX** For a supplemental video, please see the online version of this paper.