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Commentary: In left atrial esophageal fistula repair there is more than one way to “skin the cat”: Just remember “first things first”

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Left atrial-esophageal fistula (AEF) following endovascular ablation is a rare but fatal complication, occurring in less than 1% with a mortality approaching 80%.^{1,2} Diagnosis is usually delayed and mortality often occurs due to devastating neurologic injury, uncontrollable sepsis, or massive gastrointestinal bleeding.^{1,2} A contrast computed tomography scan of the chest is usually sufficient for diagnosis. Conservative therapy is associated with unacceptable mortality; therefore, urgent surgical intervention is the treatment of choice. With the increasing frequency of ablation procedures, it is important to understand how to diagnose and manage this condition.

In this issue of the *Journal*, Guenthart and colleagues³ describe their 2-staged approach for treating a patient with a left AEF who presented with neurologic symptoms 3 weeks following an endovascular ablation. The authors first and foremost should be congratulated on a successful outcome in such a difficult patient. Endovascular ablative procedures continue to rise in number, and although serious complications are rare, the deadly complication of a left AEF has increased in frequency over the last decade. The increased awareness of this complication has led to a concerted effort to promptly diagnose and treat patients

Left atrial esophageal fistula.

CENTRAL MESSAGE

Left AEF is a life-threatening complication. An intracardiac repair via sternotomy, CPB, and early aortic crossclamping, followed by esophageal repair, remains the optimal surgical technique.

who have symptoms suspicious for left AEF. This is a very timely article because it reminds us the serious nature of the complication and how important it is to make a prompt diagnosis to appropriately institute treatment. Second, it underscores the importance of treating the primary problem first in a controlled environment—intracardiac repair of the left atrium via sternotomy, on cardiopulmonary bypass, with early crossclamping of the aorta. This important principle of repair (intracardiac repair first, followed by repair of the esophageal defect) was originally promoted and published by our group at the University of Southern California (Figure 1).⁴ The primary mode of death or devastating morbidity in these patients is neurologic damage from transit of air or emboli from the esophagus to left atrium and systemic circulation, leading to large ischemic strokes. Thus, the most important aspect of treatment for these patients is expeditious repair of the intracardiac defect (fistulous tract) in the left atrium on cardiopulmonary bypass with early crossclamping of the aorta, thereby limiting the transit of air or embolic particles to the brain. These principles of repair give the patient the best chance for a successful outcome.

There are 2 novel aspects of this paper that have yet to be described in the literature that are worthy of mentioning. The first is the use of oral contrast in a prone patient to help aid in the diagnosis of a left AEF. The second is the use of a stapling device to divide the fistulous tract between

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FIGURE 1. A, Left atrial esophageal fistula. B, Left atrial esophageal fistula in relationship to pulmonary veins. C, Intracardiac repair of left atrial esophageal fistula. D, Computed tomography scan demonstrating air in the left atrium. Arrow indicates left atrial esophageal fistula.

the esophagus and posterior pericardium and left atrium. The authors should be congratulated on both of these novel ideas, which have added to the surgeon's armamentarium in treating these complex patients. Left AEF is a rare complication following endovascular ablation but continues to result in devastating neurologic injury with high mortality.

The surgical approach of repairing the intracardiac defect first in a controlled environment, preventing ongoing neurologic injury, and subsequently addressing the esophageal defect provides the surgeon with a safe and reliable method of repair.

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