

EP CASE REPORT

Endoscopic closure of oesophageal perforation after catheter ablation for atrial fibrillation

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A 55-year-old man with long-standing persistent atrial fibrillation (AF) and previous tachycardiomyopathy underwent radiofrequency catheter ablation under general anaesthesia, and antral circumferential pulmonary vein isolation was achieved using a non-irrigated 8 mm catheter and NavX-ENSITE (SJM, St. Paul, MN, USA). At the left atrial posterior wall (LAPW), the power was reduced from 50 W to 30 W (55°C), and the luminal oesophageal temperature reached 37.7°C, close to the left pulmonary veins.

Routine oesophagogastroduodenoscopy (OGD) performed on the first day (D1) after ablation showed an asymptomatic shallow ulcer at the left lateral wall of the oesophagus 30 cm from the incisors. The patient was discharged with high-dose proton pump inhibitor plus sucralfate but returned to the hospital on D3, complaining of odynophagia and neck pain. OGD was repeated and showed an oval, shallow, 1.5 cm ulcer covered by a thin layer of fibrin and a cricopharyngeal haematoma. Thorax computed tomography (CT) on D7 showed no oesophageal perforation. On D8, the patient underwent a control OGD, which revealed a deep oval ulcer with a thick fibrin covering (Figure 1A) and haematoma healing. Therefore, he was placed on a fasting, parenteral diet, and was administered topical oral atropine. On D14, the patient was asymptomatic, but a control thorax CT showed a small perforation in the left anterior wall of the oesophagus (Figure 1B) with a small pneumomediastinum close to the LAPW, associated with mild leucocytosis and a mild increase in C-reactive protein (CRP) level. Hence, empiric intravenous piperacillin-tazobactam was initiated. Two days later (D16), the patient remained stable and afebrile despite mild chest pain and elevated CRP level, prompting the surgical team to perform endoscopic closure of the 10 mm

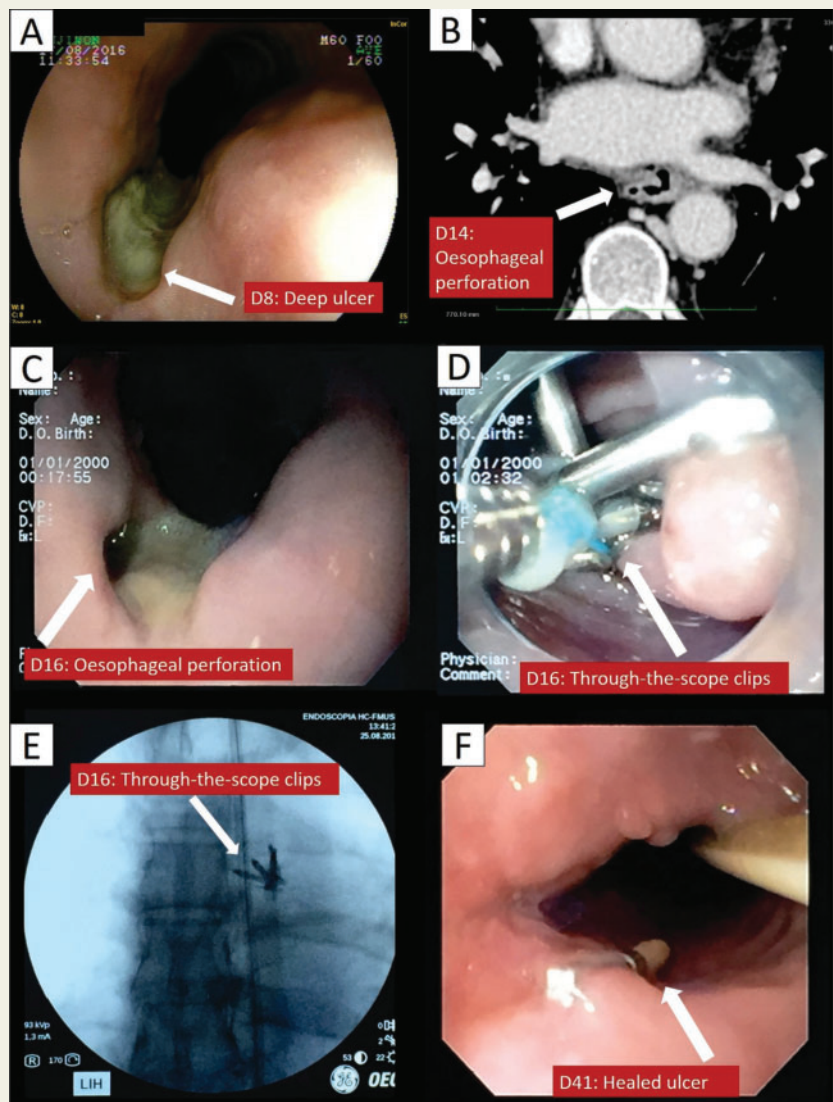


Figure 1 Panel A shows endoscopy at D8, with a deep ulcer with thick fibrin covering, at D14 CT scan showed oesophageal perforation (Panel B), confirmed by endoscopy at D16 (Panel C), in the same procedure the perforation was closed using endoloop technique (Panel D and E). A control endoscopy performed three weeks later showed total healing of the ulcer.

oesophageal orifice inside the 18 mm ulcer (Figure 1C) using through-the-scope clips (TTSC) (Figure 1D and E). On D20 (4 days after endoscopic closure), a new thoracic CT showed a closed orifice, and enteral diet was started with antibiotic treatment for 14 days. On D40 (24 days after closure), the second control CT revealed pneumomediastinum absorption with no contrast spilling, confirming perforation occlusion. The following day, OGD showed scar retraction at the endoclip sites and total healing of the ulcer (Figure 1F). Subsequently, the oral diet was resumed, and the patient was discharged without any other complications. Afterwards, the clips were removed spontaneously, which usually occurs 7 days after closure. No AF recurrence or gastrointestinal symptoms occurred during the 1-year follow-up period.

In this case of early stage <2 cm oesophageal perforation, an approach that included gastrointestinal rest, antibiotics, and endoscopic closure with TTSC was successful. In a couple of cases, the endoscopic technique using endoclips was associated with good recovery.¹ Although other strategies could have been adopted, including stenting placement² or conservative treatment, we believed that endoclip therapy was a useful option in the management of early stage perforation. Perhaps, the use of endoscopic negative pressure therapy in the deep ulcer phase could have been helpful as well.³

Conflict of interest: none declared.

References

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