Therapeutic interventional endoscopic bail-out in life-threatening surgical complications

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Therapeutic interventional thoracic endoscopy has become an important adjunct to major thoracic surgery programs over the last decade. We have seen expanded indications for endoscopic interventions both in the preoperative thoracic surgical setting in terms of endoscopically optimizing patients before surgery¹ and in the postoperative setting² in terms of bailing surgeons out of surgical complications and their associated morbidities. This report by D'Andrilli and colleagues³ is a great example of a minimally invasive endoscopic procedure that bailed a patient out of a major morbidity and associated mortality using a bronchoscopic intervention.

In this report, D'Andrilli and colleagues³ from Rome describe the successful closure of a complex bronchopleural fistula occurring at 2 sites in the bronchus after a right lower and middle lobe bilobectomy in a patient who had received neoadjuvant chemoradiotherapy for preoperatively identified N2 disease. Vascularized flap buttressing was not used in this case. The patient developed a 3-mm dehiscence of the bronchial staple line and a 2.5-cm ischemic defect on the right main bronchial wall. This is indeed a complex situation to fix surgically and is associated with a high mortality. Two separate techniques were used to fix the holes: a covered stent for the membranous wall defect and an Amplatzer device (St Jude Medical, Saint Paul, Minn) for the staple line defect. Both holes were successfully closed with no associated morbidity at 1-year follow-up.

Complex endoscopic interventions as attempted treatment strategies for patients after thoracic surgery should be performed by skilled endoscopic teams. These procedures not only are technically complex but also require a thoughtful and experienced team approach to decision making and deciphering appropriate indications for endoscopic as opposed to surgical approaches to repair surgical complications. In centers where nonsurgeons are performing

The 2017 thoracic surgeon's toolbox.

Central Message

Advances in interventional thoracic endoscopy have allowed for novel techniques that can, in certain situations, avoid complex surgery in patients with life-threatening thoracic disease.

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therapeutic endoscopy, a close working relationship and thoughtful discussion before endoscopic intervention in surgical cases are vital to provide the best treatment plan for each patient and not cause unrepairable damage to the tracheobronchial tree, which would make surgical bail-out postendoscopic intervention impossible.

Advances in interventional thoracic endoscopy have allowed for novel techniques that can, in certain situations, avoid complex surgery in patients with thoracic disease. Thoracic surgeons need to be aware of these techniques, to have an open mind, and to consider them on a case-by-case basis as they encounter patients with complications after surgery. Remember, it was not that long ago that the emergency treatment for a bleeding endotracheal or endobronchial tumor was resection.

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