Letter to the Editor

Postoperative perforation in the bronchus intermedius: completion sleeve bilobectomy is an option

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We read with great interest the case report of postoperative perforation in the bronchus intermedius membrane after a primary lung cancer resection reported by Hirami et al.[1]. In a similar situation we reported [2] a case with postoperative non-stump bronchopleural fistula due to necrosis of large area of the membranous part of the bronchus intermedius up to the opening of the right upper lobe. A completion lower sleeve bilobectomy was performed; we removed the middle lobe, all of the bronchus intermedius and part of the right main bronchus; followed by anastomosis of the upper lobe bronchus to the right main bronchus. The patient passed an uneventful postoperative course and is still doing well 10 months after surgery. We did the same technique in another patient but he died 1 month after the second operation due to sepsis and multi-organ failure. The residual lobe expanded and the anastomosis was intact up to the time of death.

We agree with the authors that ischemia is the main predisposing factor for fistulization; the subcarinal area is traversed by feeding bronchial arteries and dissection in this area must be performed as carefully as possible to preserve some of these nutrient vessels [3]. Excessive use of cautery may exaggerate ischemia (rather than causing fistula by direct injury) with subsequent development of fistula. We prefer division of the vessel with scissors between liga clips whenever possible.

Middle lobectomy with the creation of new bronchial stump at a more proximal healthy bronchus and coverage of the new stump with viable flap as reported by the authors in two patients should be the first option. On the contrary, completion pneumonectomy should be the last choice. In one report [4] the mortality rate of completion pneumonectomy, employed for an early complication of a primary operation, reported to be 37.5% and the mortality rate after right side procedure was significantly higher than the left side. Sleeve bilobectomy has the advantage of preserving lung parenchyma that can fill the pleural space and may be a source of retrograde blood supply to the new suture or anastomosis line. Needless to say that decortication of the residual lobe and debridement and cleaning of the pleural space are essential for the success of the procedure.

Finally, we agree with the authors that early endoscopic diagnosis and surgical intervention before the development of empyema and systemic sepsis is crucial for good results. Also, we recommend that every effort should be made to avoid completion pneumonectomy; in difficult situations sleeve bilobectomy can be a viable option in the management of this complication.

References


* The authors of the original paper [1] were invited to comment on this Letter to the Editor but declined the offer.

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