Less is more

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Managing centrally located lung tumors can be quite challenging. Surgeons must strike a balance between performing an adequate oncologic resection and preserving lung parenchyma, especially in patients with relatively poor pulmonary reserve. Pagès and colleagues¹ add to the evidence in favor of sleeve lobectomy over pneumonectomy with an analysis of Epithor, the French national database. This large, retrospective study includes 941 and 5318 patients who underwent sleeve lobectomy and pneumonectomy, respectively. Whereas atelectasis and pneumonia were more frequent in the sleeve lobectomy cohort, both disease-free and overall survival were more favorable in this group.

This study confirms findings of other large, retrospective studies that found sleeve lobectomy to be advantageous for long-term survival. Looking at the 2 groups, those who underwent sleeve lobectomy appear to have been somewhat healthier at baseline than those undergoing pneumonectomy. They were younger, had lower American Society of Anesthesiologists scores, and had higher baseline forced expiratory volume in 1 second. The potential contribution of these factors to the outcomes must not be overlooked. Moreover, 1 notable feature of the current study is the large proportion of patients in both groups lost to follow-up. Fewer than 50% of patients in each group were evaluable at the 1-month postoperative time point. Also, the authors used 2 methods of statistical analysis: a matching analysis and inverse probability for treatment weighting analysis. These methods sometimes produced conflicting results.

Although no prospective, randomized controlled trials have been performed comparing sleeve lobectomy to pneumonectomy, it is unlikely that such a trial could be successfully executed. However, several retrospective studies, as well as meta-analyses, have been published, all favoring sleeve lobectomy over pneumonectomy in terms of disease-free survival, overall survival, and postoperative quality of life.²⁻⁵ The patients undergoing pneumonectomy outnumbered those undergoing sleeve lobectomy by nearly 5:1. This is similar to previous findings in the Society of Thoracic Surgeons General Thoracic Surgery database as well, and likely reflects the fact that sleeve lobectomy can be technically more difficult to perform than pneumonectomy.⁶

Parenchymal preservation must also be considered when planning oncologic resection.

Central Message

When technically feasible, sleeve lobectomy should be considered the standard resection for patients with centrally located lung tumors.

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The study by Pagès and colleagues¹ is unique in that the information was derived from a nationwide database with broad participation. In fact, the authors note that participation in Epithor is mandated to maintain medical accreditation and thoracic surgery unit certification in France. Using data from 103 centers with external audits, these results are likely as close to real life as possible. The findings from this study, in addition to others, should strongly encourage thoracic surgeons to perform pneumonectomy as sparingly as possible. Recognizing that at least some patients are not candidates for sleeve resection, we should consider sleeve lobectomy as the standard—and best—possible option in all patients with central tumors, performing pneumonectomy only as necessary and as dictated by a patient's tumor.

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