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See Article page 1389.

Commentary: Second ipsilateral metachronous lung cancer: What to do?

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The article by Hattori and colleagues¹ deals with an interesting and still not sufficiently explored issue in thoracic surgery: the role of repeated anatomic resection for radical treatment of second metachronous ipsilateral non-small cell lung cancer (NSCLC). Although the incidence of a second primary lung cancer occurring ipsilaterally after curative resection is limited to 1% to 2% of patients, this topic carries increasing clinical implications, mainly due to the expanding indications for segmentectomy to treat stage IA NSCLC and to the progressively more frequent early detection of second NSCLC because of improved diagnostic technology and oncologic surveillance.²⁻⁴

In this clinical scenario, the present article provides several meaningful scientific messages. The first is that, when feasible, a nonanatomic re-resection can be an adequate therapeutic choice because overall survival and recurrence-free survival results are comparable to those after anatomic resection, but postoperative morbidity is lower. This is particularly true for less aggressive tumors such as peripheral adenocarcinoma with ground-glass opacity component.

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CENTRAL MESSAGE

Repeated anatomic parenchymal-sparing resection for the treatment of metachronous ipsilateral NSCLC should be preferred to CP when nonanatomic resection is not feasible.

The second important message is that when a repeated nonanatomic resection is not feasible (mainly due to tumor size and location), attempt to avoid completion pneumonectomy (CP) performing anatomic parenchymal-sparing resections is justified, because these procedures show similar surgical outcomes (in terms of morbidity, mortality, and long-term survival) compared with CP and allow beneficial preservation of lung parenchyma and lower rate of life-threatening complications. This could indicate a novel promising strategy when approaching a second metachronous ipsilateral lung cancer. CP remains a valid option if no lesser resection is technically possible because of the large size and central location of the tumor.

A further evidence pointed out by this article is that repeated anatomic resections are demanding procedures requiring adequate surgical skill and judgment. The presence of dense adhesions and hilar fibrosis is almost the rule, with consequent potential need for challenging technical tasks including reconstructive procedures.

Main limitations of the present article include selection bias, which are unavoidable when considering a retrospective study like this, and the limited statistical sample, although few similar series have been reported in the literature so far, with most of published data referring to second contralateral tumors.⁵

Comparison with patients undergoing stereotactic body radiation therapy is often considered as a crucial point to assess the role of reoperations for ipsilateral metachronous lung cancer. However, caution should be used when comparing results of stereotactic body radiation therapy, especially because series of patients undergoing irradiation have not had pathological staging and have variable inclusion criteria, sometimes without a conclusive histologic diagnosis.^{4,6}

Anatomic parenchymal-sparing re-resection seems a promising route in this clinical setting. However, the benefit of sparing lung parenchyma with respect to CP may appear questionable in some particular cases, as that reported by Hattori and colleagues¹ of a right lower lobectomy after

previous ipsilateral upper lobectomy, leaving only the residual middle lobe. Therefore, further specific evaluation for each type of anatomic operation will be necessary to provide more precise and thorough indications for such interventions.

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See Article page 1389.

Commentary: Not only safety but also efficacy is required in repeat pulmonary resection for second non-small cell lung cancer

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In this issue of the *Journal*, Hattori and colleagues¹ reviewed the records of 104 patients who underwent surgical resection for ipsilateral metachronous second non-small cell lung cancer. The authors found that 74% of the patients were diagnosed as second primary cases, for which the 3-year overall survival (OS) was 80.1%. The survival data were favorable in terms of oncologic effect. However, we need stronger data to support the concept of repeat resection

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CENTRAL MESSAGE

We need stronger data to support the concept of repeat resection for second primary lung cancer. As well, other physicians need to understand the concept for it to be widely followed.

for second primary lung cancer after pulmonary resection. As well, physicians from many disciplines need to understand the concept for it to be widely followed by in addition to thoracic surgery. Two aspects of this topic require attention, discussed to follow.