INTRALOBAR SPREAD OF PRIMARY LUNG CANCER IS MOSTLY RETROGRADE EXTENSION FROM HILAR LESION: A RATIONALE OF RADICAL SEGMENTECTOMY
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Objectives: Segmentectomy has been re-evaluated as a curative surgery for peripheral small lung cancer. This study aims at clarifying adequacy of the radical pulmonary segmentectomy by examination of intralobar spread pattern in resected specimens.

Methods: From September 2009 to July 2012, in a consecutive series of 312 patients who underwent pulmonary resection of more than two segments for lung cancer, intralobar spread to lymph nodes as well as lung parenchyma were pathologically examined. Thirty-four patients who received preoperative treatments were excluded. TNM staging and nodal station number was according to UICC-7 coding.

Results: Eligible 278 patients (male/female: 194/84) included 187 adenocarcinoma, 66 squamous cell carcinoma, 12 large cell carcinoma and 13 others, and 188 peripheral type and 90 central type. Pathological stages were 137 0-IA, 64 IB, 31 IIA, 18 IIB, 25 IIIA and 3 IIIB IV, and 27 N1 and 22 N2/3. Sixty-two peripheral small (≤20 mm) lesions were not accompanied by any intra/extra nodal or parenchymal metastases except for one small cell lung cancer and two solid adenocarcinomas. In 229 patients with N0, intralobar spread was detected in 2 patients; these were detectable on preoperative radiological examination. Intralobar spread was observed in 23 (8.3%), in whom 21 (7.6%) were segmental/intersegmental nodal metastases, 5 (1.8%) were parenchymal metastases (3 were both). Of them, spread to non-tumour-bearing segment was recognized in only 5 (1.8%), and 4 of them were harboring extralobar nodal metastasis. In 1 (0.4%) patient, nodal metastasis was occurred only in non-tumour-bearing segment. N2 skipping hilar and intralobar nodes were recognized in 7 (2.5%) patients.

Conclusions: Segmentectomy would be almost as radical as lobectomy for peripheral type non-small cell lung cancer. However, if nodal metastasis is recognized during surgery, lobectomy should be done to avoid incomplete resection in case of retrograde spread to non-tumour-bearing segment.

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