Case report - Thoracic oncologic
Combined typical carcinoid and acinic cell tumor of the lung

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Received 13 October 2010; received in revised form 16 November 2010; accepted 17 November 2010

Abstract
We report a case of combined typical carcinoid and acinic cell tumor of the lung in a 55-year-old female. A chest radiograph revealed an abnormal shadow. Computed tomography (CT) showed a tumor in the S3 segment of the right lung. The transbronchial biopsy yielded a diagnosis of non-small-cell lung cancer. Radical surgery was performed. The pathological diagnosis was combined typical carcinoid and acinic cell tumor of the right lung. This is third case of this tumor which has been reported.

Keywords: Bronchial tumor; Lung cancer neuroendocrine; Pathology

1. Introduction
A combined typical carcinoid and acinic cell tumor of the lung is a very rare tumor, with only two previously reported cases. We report a case of a resected combined typical carcinoid and acinic cell tumor of the lung.

2. Case report
A 55-year-old female with an eight pack-year history of smoking presented to our hospital with cough. A chest radiograph showed an abnormal shadow. Chest computed tomography (CT) showed a tumor in the central portion and atelectasis in the S3 segment of the right lung (Fig. 1). A transbronchial biopsy of the tumor revealed mucoepidermoid carcinoma with no evidence of metastasis. A right thoracotomy and right upper lobectomy and lymph node dissection were performed.

The tumor, measuring 13×11×9 mm, was situated in the right B3b bronchus (Fig. 2a). On cut surface, the tumor had a uniform, gray-white appearance and relatively well-circumscribed borders. There was atelectasis in the lung tissue peripheral to the tumor.

Histological examination revealed a mixed morphological pattern with typical carcinoid and acinic cell adenocarcinoma components (Fig. 2b–d). Transition of two tumors was observed. There was no evidence of either bronchial or vessel involvement. Immunohistochemically, both components were positive for chromogranin A and synaptophysin. No metastases were found in the lymph nodes and other parts of the lung. The bronchial cut end was negative for tumor.

Postoperative chemotherapy was not administered. The patient had no evidence of recurrence three years after the operation.

3. Discussion
Here, we report the third case of combined typical carcinoid and acinic cell tumor of the lung. Miura et al. first reported this tumor as ‘bronchial carcinoid tumor mimicking acinic cell tumor’ [1]. Rodriguez et al. subsequently named this tumor ‘combined typical carcinoid and acinic cell tumor’ [2]. It is characterized as both typical carcinoid tumor and acinic cell carcinoma in a single tumor, and has also been described in the pancreas [3]. As transition of two types of tumors was observed, this tumor occurs...
Fig. 2. Pathological findings. (a) Gross findings. The tumor, which measured 13 × 11 × 9 mm, was situated in the right B3b bronchus. It had a uniform, gray-white appearance on cut surface and relatively well-circumscribed borders. The lung tissue peripheral to the tumor was atelectatic. (b) Microscopic findings. Two components were seen in the tumor; a typical carcinoid component in the center part and an acinic cell carcinoma component in the right upper part (H&E stain, original magnification 4 ×). (c) A higher magnification of the typical carcinoid component (H&E stain, original magnification 40 ×). (d) A higher magnification of the acinic cell carcinoma component (H&E stain, original magnification 40 ×).

not by collision of two tumors but by a mixture of two tumors.

Miura et al. reported a case of a 59-year-old male with this tumor in the S5 segment of the right lung at a site 7 mm distal to the bifurcation of the B5bi and B5bii bronchi [1]. The patient remained tumor-free one and half years after the operation. Rodriguez et al. reported a case of a 70-year-old female with this tumor in the lower lobe of the right lung. The precise location and clinical outcome were not reported [2].

The clinical features of this tumor remain unknown because it is very rare. Since the tumor was resected at an early stage in our patient and there are no reports on the effectiveness of adjuvant therapy, we elected to forgo adjuvant chemotherapy. Typical carcinoid tumors of the lung have a relatively good prognosis. In the pancreas, typical carcinoid tumors with acinic cell components do not portend a worse prognosis than typical carcinoid tumors without acinic cell components [3]. With no evidence of recurrence three years after resection, the prognosis of this tumor in our patient seems to be relatively good; this tumor, in its early stages, may be cured by surgical resection alone.

References

