
Coexisting bronchial carcinoid tumor and pulmonary tuberculosis in the same lobe: a case report

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ÖZET

Aynı lobda bronşiyal karsinoid tümör ve pulmoner tüberkülozun birlikteliği: Bir olgu nedeniyle

Pulmoner tüberküloz ve bronşiyal karsinoid tümörün senkron gelişimi nadirdir. Pulmoner tüberküloz akciğer kanserinin tüm histolojik tipleri ile birlikte görülmesine rağmen, karsinoid tümör ile pulmoner tüberkülozun senkron görüldüğü az sayıda olgu rapor edilmiştir. Biz aynı lobda yerleşmiş bir pulmoner tüberküloz ve karsinoid tümör olgusunu sunuyoruz. Otuzdokuz yaşında kadın hasta iki aydır devam eden göğüs ağrısı yakınması ile başvurdu. Göğüs grafisi sağ alt akciğer alanında konsolidasyon gösteriyordu. Toraks bilgisayarlı tomografisinde multipl mediastinal lenfadenopati ile sağ akciğer alt lobunda infiltrasyon ve atelektazi saptandı. Fiberoptik bronkoskopide sağ alt lob bronşunun proksimalini tam olarak tıkayan kitle görüldü. Bronkoskopik biyopsinin patolojik tanısı tipik karsinoid tümördü. Hastaya sağ alt lobektomi ve mediasten lenf bezi diseksiyonu yapıldı. Rezeke materyalin patolojik incelemesi, aynı lobda karsinoid tümör ve pulmoner tüberkülozun birlikteliği ve tüberküloz lenfadenit tanısı olarak rapor edildi.

Anahtar Kelimeler: Karsinoid tümör, tüberküloz, akciğer, senkron.

SUMMARY

Coexisting bronchial carcinoid tumor and pulmonary tuberculosis in the same lobe: a case report

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The synchronous occurrence of pulmonary tuberculosis and bronchial carcinoid tumor is unusual. Although pulmonary tuberculosis can coexist with all histological types of lung cancer, few coexisting cases of bronchial carcinoid tumor and pulmonary tuberculosis have been reported. We present coexistent bronchial carcinoid tumor and pulmonary tuberculosis in the same lobe. A 39-year-old woman was admitted to our clinic with chest pain for two months. Chest radiograph showed consolidation in the right lower field. Computed tomography of the thorax demonstrated multiple mediastinal lymphadenopathy.

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denopathies, infiltration and atelectasis in the right lower lobe. Fiberoptic bronchoscopy showed a mass lesion totally obstructing the proximal right lower lobe bronchus. The pathological diagnosis was typical carcinoid tumor. Right lower lobectomy with mediastinal lymph node dissection was performed. The pathological examination of resected material revealed coexistent tuberculosis and carcinoid tumor in the same lobe and mediastinal tuberculous lymphadenitis.

Key Words: Carcinoid tumor, tuberculosis, pulmonary, coexistence.

The relationship between tuberculosis (Tbc) and carcinoma has been known for over two centuries (1). The coexisting cases of cancer and Tbc have been recorded in lungs and other organs (1-4). The incidence of coexisting cases ranges from 0.7% to 2.32% of patients with pulmonary Tbc and between 1.9% and 4% of patients with lung cancer (5-7). Although squamous cell carcinoma is the most common tumor type, all histological types of lung cancer has been reported in coexisting cases (5,8). There were few coexisting cases of bronchial carcinoid tumor and pulmonary Tbc in English literature (8). The aim of this paper is to present a coexisting case of bronchial carcinoid tumor and pulmonary Tbc in the same lobe and to discuss in the context of previous reports.

CASE REPORT

A 39-years-old woman was admitted on April 2002 with complaint of chest pain for two months. She was a nonsmoker textile worker. Chest radiograph showed consolidation on lower zone of right lung (Figure 1). On admission, physical examination revealed normal findings. Peripheral blood examination, routine biochemical tests and urine analysis were within normal limits. Erythrocyte sedimentation rate was 45 mm

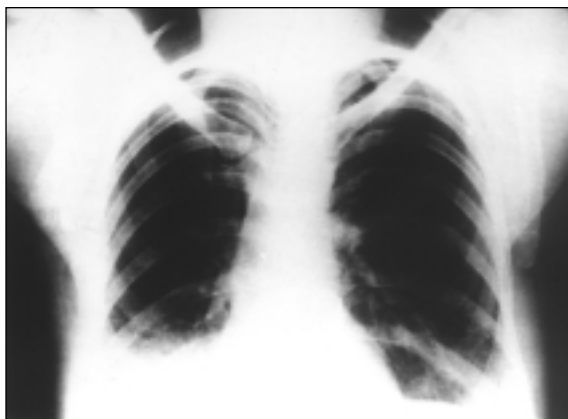


Figure 1. Chest radiograph shows consolidation in lower zone of right lung.

in first hour. Computed tomography (CT) of thorax demonstrated multiple mediastinal lymphadenopathies, infiltration and atelectasis on lower lobe of right lung (Figure 2). Fiberoptic bronchoscopy showed a mass lesion totally obstructing the proximity of right lower lobe bronchus. The pathological diagnosis of bronchoscopic biopsy specimen was typical carcinoid tumor. The patient had normal pulmonary function tests. Right lower lobectomy with mediastinal lymph node dissection was performed. The pathological examination of resected material revealed the coexistence of Tbc and carcinoid tumor in the same lobe and the diagnosis of tuberculous lymphadenitis (Figure 3, 4). She was started on a regimen of isoniazid, rifampicin, pyrazinamide and ethambutol after operation. No any pathological finding was detected by the end of 14 months.

DISCUSSION

The association of Tbc and carcinoma was first described by Bayle in 1810 (9). Libshitz et al re-

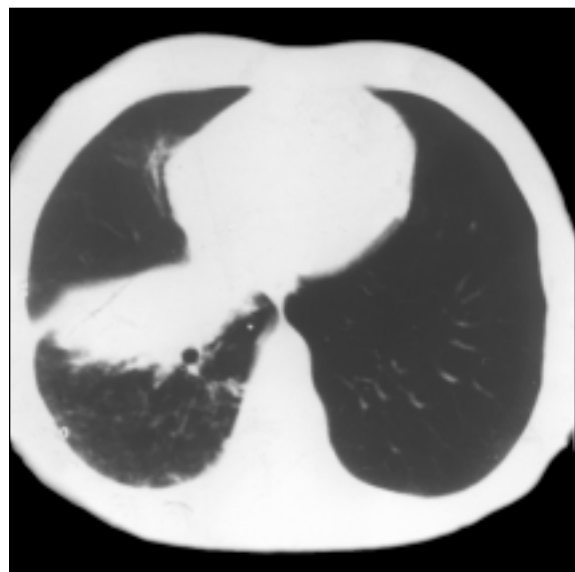


Figure 2. CT of thorax demonstrates infiltration and atelectasis on right lower lobe.

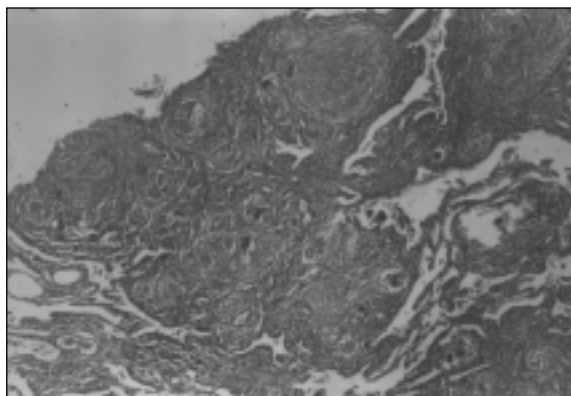


Figure 3. Granulomatous lesions within pulmonary parenchyma.

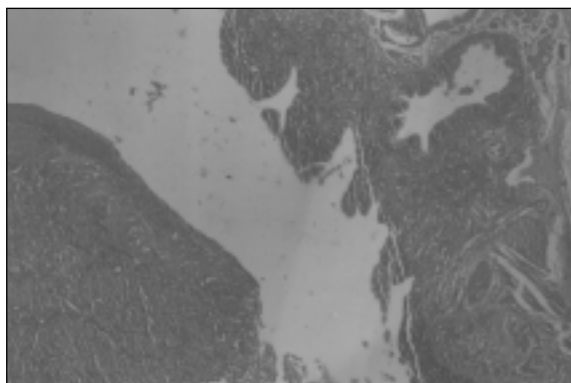


Figure 4. Carcinoid tumor in bronchial lumen.

ported that the frequency of Tbc in cancer patients was 90 per 100.000 and Tbc in cancer patients occurred at a nine times greater than in the general population (10). While they found that Tbc was most frequent in leukemia patients, a previous report suggested that highest prevalence for coexisting Tbc was seen in patients with Hodgkin's disease followed by lung cancer (11). Pulmonary Tbc can coexist with all histological types of lung cancer (5,8,12). The proportions of tumor type among coexisting cases are not different from those seen in general population (5). The coexistence of bronchial carcinoids and pulmonary Tbc was rarely reported in English literature because bronchial carcinoid tumors are rare tumors of the lung. Agaev reported that among 37 patients with bronchial carcinoid tumor, nine patients had coexistence of pulmonary Tbc (8). We present a coexisting case of pulmonary Tbc and bronchial carcinoid tu-

mor. According to our unpublished data, we found coexistence of pulmonary Tbc in only one case among 24 cases with bronchial carcinoid tumor diagnosed at our center between 1996 and 2003.

The relationship between lung cancer and pulmonary Tbc has been viewed by many authors (6,7,9,12). By the interval of diagnosis of lung cancer and Tbc, the patients are divided into three groups; Tbc preceding type, lung cancer preceding type and coexistent type (6). Tamura et al classified 25 coexisting cases into two groups (7). While the first group included 11 patients that Tbc was sequential to lung cancer, the second group consisted of 14 patients that Tbc was concurrently detected with lung cancer. The other report has viewed the relationship of two conditions in three ways: As one of cause and effect (scar cancer) as the reactivation of Tbc by cancer and as coincidental (1-3,9). According to our opinion, the present case is coexisting type or concurrent type.

The location of lung cancer and Tbc is generally considered as independent (7). The lesions of lung cancer and pulmonary Tbc are mainly on the same lung (6). The foci of two diseases were found more often in the same lobe than in different lobes (5). In the present case, the lesions of cancer and Tbc are located in the same lobe. There was a close relationship between the location of two diseases and the time required for diagnosis. When Tbc and lung cancer are located in different lobes the time required for diagnosis is shorter. When two diseases are located in the same lobe diagnosis time can be longer because one can mask the other condition (9). In our case, chest radiograph and CT of thorax showed lesion in only one lobe of lung. We had no suspicion of two different diseases before histological examination of surgical material.

In conclusion, the coexistence of pulmonary Tbc and bronchial carcinoid tumor is rarely seen. When two diseases are located in the same area, the diagnosis of lung cancer and pulmonary Tbc is difficult before thoracotomy because one lesion can mask the other.

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