THE ROLE OF SURGERY IN THE MANAGEMENT OF PRIMARY BRONCHIAL LYMPHOMA: A REPORT OF TWO CASES

BRONŞİAL LENFOMADA CERRAHİNİN YERİ İKİ OLGU SUNUMU

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SUMMARY: Primary bronchial lymphoma is a rare entity that is both clinically and radiographically confused with bronchogenic carcinoma in elderly patients. In such cases of suspected malignancies, surgery is required for diagnosis. We operated on two patients with the diagnosis of suspected malignancy of the lung. No metastases were found in the detailed work up before the operation. One patient underwent right pneumonectomy and the other underwent explorative thoracotomy to obtain tissue specimens. Frozen section studies were performed for both of them. In the first patient the frozen section study demonstrated a malignant epithelial tumor and in the second a less differentiated tumor. Histopathologic diagnoses for both patients were bronchus associated lymphoid tissue, BALT type lymphoma. Although pulmonary lymphomas are rare and localized only in the lungs, lymphomas should be regarded as systemic disorders and must be treated with chemotherapy and/or irradiation. However, they need to be diagnosed properly and surgery can be a tool for a definite diagnosis.

Key Words: *BALT, MALT, Lymphoma, Surgery.*

ÖZET: Primer bronşial lenfoma radyolojik ve klinik olarak yaşlı hastalarda bronşial kanser ile karışan, nadir görülen bir antitedir. Maligniteden şüphe edilen böyle vakalarda cerrahi tanı için gereklidir. Şüpheli akciğer malignitesi tanısı ile iki hasta tarafımızdan opere edilmiştir. Operasyon öncesi hastalarda detaylı araştırmalarda herhangi bir tmetastaz tespit edilmemiştir. Bir hastaya sağ pnömonektomi diğerine ise eksploratris torakotomi uygulanmış ve wedge rezeksiyon yapılmıştır. Her iki olguya da "frozen section" sonucu malign epitelial tümör ikinci olguda ise az diferensiye tümör olarak gelmiştir. Olguların histopatolojik tanısı her ikisinde: Bronş ilişkili lenfoid doku; BALT tipi lenfoma olarak değerlendirilmiştir. Pulmoner lenfomalar nadir görülmelerine ve akciğerde lokaleze olmalarına karşın, lenfomalar sistemik bir hastalık olarak kabul edilmeli ve tedavisinde kemoterapi ve/veya radyoterapi uygulanmalıdır. Sonuçta bu vakalar hızlı ve doğru tanı cerrahi yöntemlerle kesinleştirilebilmektedir.

Anahtar Kelime: *BALT, MALT, Lenfoma Cerrahi.*

INTRODUCTION

Primary bronchial lymphoma is a rare disorder and a current diagnosis needs open thoracotomy in selected cases. Most primary lymphomas of the lung arise from the mucosa-associated lymphoid tissue of the bronchus (MALT). However, its classical definition is clonal lymphoid proliferation affecting the submucosal area of the bronchioles (1,2). We operated on two patients with suspected malignancies. We report these two patients and discuss the role of surgery in primary bronchial lymphoma.

CASE REPORTS

Case 1: The first patient was operated on in 2002. He was 56 years old and was admitted to our hospital with hemoptysis. The complaint had occurred 20 days previously. The patient had had asthma for many years and had had an appendectomy and had a smoking history of nearly 8 years. His mother had passed away at the age of 65 due to lymphoma. No pathological

signs were detected in the physical or laboratory findings. A right hilar mass was detected on the chest radiograph. The patient underwent computed tomographic scanning of the chest, which demonstrated a right hilar mass 2 cm away from the carina. Also noted was extrinsic compression in the right main bronchus (Fig. 1). In the detailed work up, we found no involvement of any other site. Flexible bronchoscopy showed a submucosal swelling in the orifice of the right upper lobe bronchus. The biopsy from this place showed normal findings. The patient was operated on with the diagnosis of a hilar mass. The frozen section study demonstrated a malignant epithelial tumor, which necessitated right pneumonectomy. The postoperative histopathological diagnosis was BALT type low-grade malignant lymphoma. The patient was recommended chemotherapy but he refused to have any medication. However, he was admitted with axillary lymphadenopathy after an 18-month healthy follow-up period. Biopsy specimens were taken and the histopathological study revealed low grade malignant lymphoma. Therefore, the patient underwent chemotherapy.

mass in the left hilum 3 cm in diameter. The lesion was located near the left main bronchus and surrounded the left upper lobe bronchus. The mass was 1.5 cm from the left main pulmonary artery (Fig. 3). The mass bordered the aortic arch and the descending aorta. Thoracic MR showed undetected findings like invasion or extrinsic compression to the pulmonary artery 1.5 cm from its orifice. Also noted were invasions on the 1.5 cm distal end of the left main bronchus and the lingual segments of the left bronchus.

He underwent flexible bronchoscopy. The bronchoscopy showed splayed left upper lobe carina and narrowed lingual segment orifice. Multiple biopsy specimens from these places demonstrated inflammatory changes. Based on these findings, the patient was operated on. A mass closest to the pulmonary artery was found. The mass was located between the left main bronchus and the superior pulmonary vein. The lesion was also invading the pericardium. Frozen sections of the tumor revealed that it was less differentiated. The histopathological diagnosis confirmed bronchus associated with lymphoid

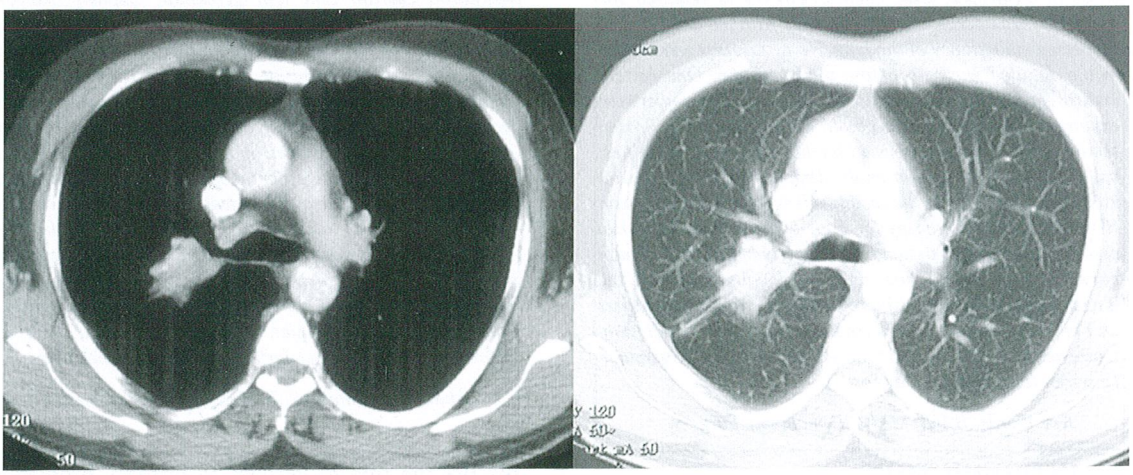

Fig. 1 A,B: Computed tomographic sections of the first patient; a-mediastinal and b-parenchymatous window, showing the presence of a pulmonary mass.

Case 2: The second patient was operated on in 2003 at the age of 37. He was admitted to our clinic with the symptoms of chronic cough and chest pain. No findings were defined in his background. His physical examination and laboratory findings were normal. A mass was found in the left hilum on his postero-anterior chest x-ray (Fig 2). Chest tomography showed a tissue, BALT type lymphoma. The patient was started on chemotherapy for lymphoma.

DISCUSSION

Bronchial mucosa plays an important role in preventing pathogens from entering the organism. Immune cells, which were hosted by lymphoid follicles, cause primary bronchial

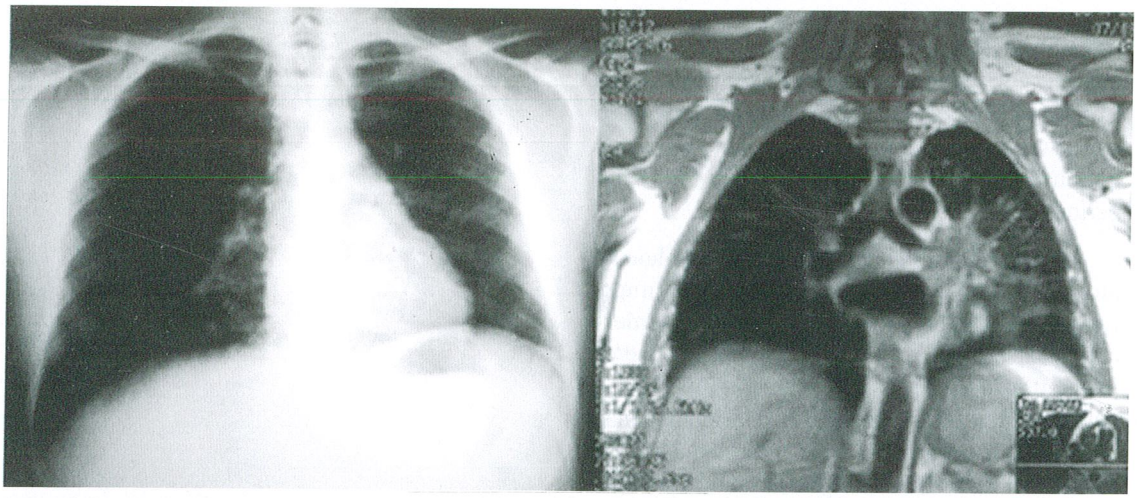

Fig. 2 A,B: a- Chest x-ray and b-MR imaging of the second patient.

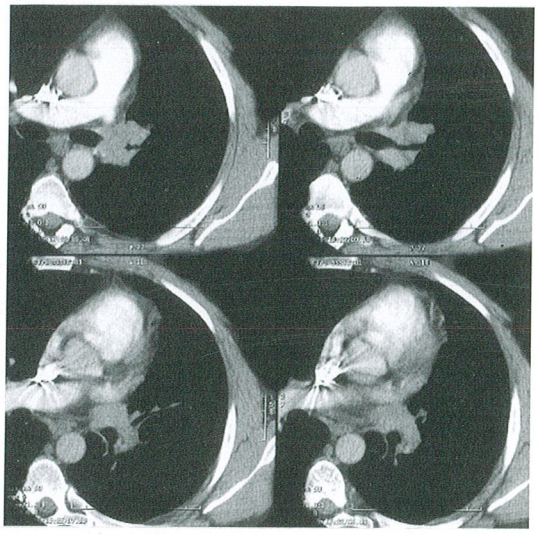

Fig. 3: Computed tomographic scans of the second patient.

lymphoma and they are present within peribronchial lymph nodes or inside the bronchial mucosa, so-called bronchus-associated lymphoid tissue (BALT) (1). However, primary bronchial lymphoma is a very rare entity. Secondary involvement of the lung by Hodgkin and non-Hodgkin lymphoma is much more frequent than primary involvement. As there is still confusion about the definitions and classification of primary bronchial lymphoma, many of these lesions are considered malignant lymphoma (2,3). In the literature, it was pointed out that BALT is seen in about 40% of patients younger than 20 years of age during autopsies (1). Several studies have demonstrated that BALT can develop under certain pathologic conditions, including chronic respiratory infection, immunodeficiency, and autoimmune disease (1). Bienenstoek et al. first described the presence of MALT in the lung in 1973 (2). As is known, most primary lymphomas of the lung arise from the MALT of the bronchus, which is extremely rare, as very few cases have been reported before. According to the literature and case histories, it should be noted that patients had a chronic inflammatory disease or an autoimmune disease before the development of lymphoma (1,2). In our two patients, we observed long-term asthma in one and a long-term bronchial infection in the other. These chronic inflammations can cause proliferation in bronchial lymphoid follicules.

Common radiographic manifestations are hilar and mediastinal lymphadenopathy. Yet pulmonary involvement in lymphoma is less common and can be seen in the parenchyma and around the tracheobronchial tree, and all these are seen with an association with hilar or mediastinal nodes (1-3). Bulky mediastinal manifestation of malignant lymphoma can be complicated by airway stenosis. The imminent respiratory failure due to compression or infiltration of central airways represents a respiratory emergency and indicates bronchoscopic stent implantation (3,4). Surgery plays important roles during the course of pulmonary lymphoma. One of the most important to obtain diagnostic tissue samples and the another is a debatable indication: curative resection (1-3). A correct diagnosis is very important for many patients as it helps early definite therapy. Resection in pulmonary lymphoma is still under discussion due to

systemic dissemination; some approve of radical resections, while others do not (2,3). In our first case, we performed pneumonectomy after the frozen section study demonstrated a malign epithelial tumor. Unfortunately, we observed lymphadenopathy after the 18-month follow-up period.

In summary, although pulmonary lymphomas are rare and localized only in the lungs, lymphomas should considered systemic disorders and must be treated with chemotherapy and/or irradiation for good cure rates. However, a definite diagnosisis needed. For selected patients, surgery is necessary for a proper diagnosis. We think that a correct diagnosis and treatment should be based on cooperation between physicians and surgeons.

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REFERENCES

1. Varoczy L, Gergeley L, Illes A. Diagnostics and treatment of pulmonary BALT lymphoma: a report on four cases. Annals of Hematology 2003; 82: 363-6.
2. Ferraro P, Trastek V, Adlakha H, Deschamps C, Allen M, Pairolero P. Primary non-hodgkin's lymphoma of the lung. Annals of Thoracic Surgery 2000; 69: 993-997.
3. Kiani B, Magro C, Ross P. Endobronchial presentation of Hodgkin lymphoma: a review of the literature. Annals of Thoracic Surgery 2003; 76: 967-72.
4. Schmidt B, Massenkeil G, John M, Arnold R, Witt C. Temporary tracheobronchial stenting in malignant lymphoma. Annals of Thoracic Surgery 1999: 67: 1448-1450.