Olgu tartışması

Endobronchial schwannoma with massive hemoptysis

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ÖZET

Masif hemoptizi ile seyreden endobronşiyal schwannoma olgusu

Elli altı yaşında erkek hasta masif hemoptizi yakınması ile kliniğimize başvurdu. Yapılan bronkoskopide sağ alt lob bronşunu tama yakın tıkayan endobronşiyal lezyon saptandı. Alınan biyopsi sonucu schwannoma ile uyumlu bulundu. Schwannomalar, schwann hücrelerinden kaynaklanan benign tümörlerdir. İntrapulmoner schwannoma ise çok nadir görülür. Diğer yandan pulmoner schwannomada masif hemoptizi son derece nadir bir bulgudur. Biz de masif hemoptizi ile komplike bir olguyu sunuyoruz.

Anahtar Kelimeler: *Hemoptizi, nörojenik tümör, schwannoma.*

SUMMARY

Endobronchial schwannoma with massive hemoptysis

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A 56-year-old man was admitted to our hospital with a complaint of massive hemoptysis. Bronchoscopy revealed a tumor obstructed the orifice of the right lower lobe bronchus. The diagnosis of endobronchial schwannoma was made by bronc-

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hofiberescopic biopsy. Schwannomas are benign tumors which originate from schwann cells. They rarely occur in the trachea or bronchus. On the other hand symptoms in pulmonary schwannoma are usually mild. Massive hemoptysis is extremely rare. We report a case of endobronchial schwannoma complicated by massive hemoptysis.

Key Words: *Hemoptysis, neurogenic tumor, schwannoma.*

Benign schwannomas or neurilemmomas are nerve-sheath tumors which arise wherever there are medullated nerves, spinal nerve roots being the most common primary location (1). They are very rare in bronchi or within the pulmonary parenchyma. We present a case of endobronchial schwannoma complicated with massive hemoptysis.

CASE REPORT

A 56-year-old man was admitted to our hospital with a complaint of massive hemoptysis (> 600 mL of blood/16-hour period) (2). The past and family histories were unremarkable. Physical examination showed no abnormal findings. The chest X-ray, biochemical profile and full blood count were normal. His chest computed tomogram (CT) showed rounded opacity adjacent to the right lower lobe, about 10 mm in diameter (Figure 1). Fiberoptic bronchoscopy was done because the bleeding ceased. Bronchoscopy revealed a tumor obstructed the orifice of the right lower lobe bronchus. Biopsy was conducted and the subsequent HE stain revealed that the lesion consisted of spindle cells proliferated with Antoni A formation (Figure 2). The S 100 immunoperoxidase stain was positive, leading to our diagnosis that the lesion was a schwannoma.

The patient was subjected to thoracotomy and right lower lobectomy, because of repeated bronchoscopies failed to stop the bleeding. He was discharged on the eleventh post-operative day, and was asymptomatic eight years following the operation.

DISCUSSION

Primary neurogenic tumors of the lung are felt to originate from schwann cells and are predominantly associated with neurofibromatosis of Von Recklinghausen disease. The second most com-

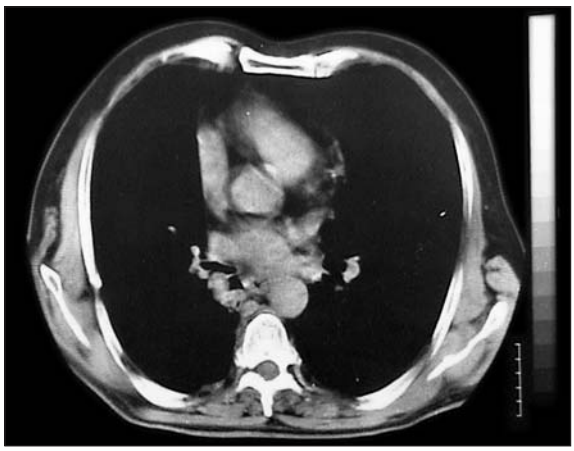

Figure 1. Computed tomographic scan demonstrates a mass occupying right lower lobe bronchus.

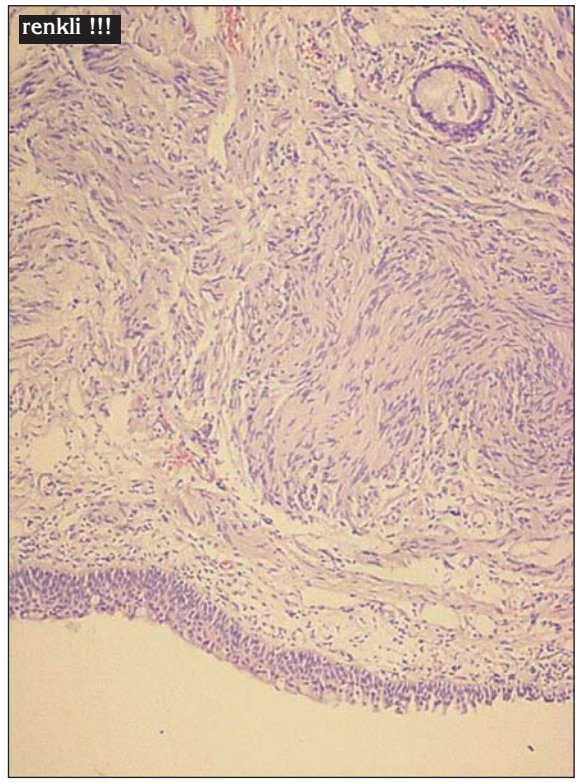

Figure 2. Spindle cells forming Antoni A formation, bronchial epithelium and submucosal gland (HE stain, x100).

mon type is schwannoma (3). Schwannomas are benign tumors which may occur in any peripheral nerve (4,5). They frequently arise from the intercostal nerves and sympathetic trunk in the thorax, while primary intrapulmonary or endobronchial schwannomas are uncommon (6). The incidence of primary neurogenic tumors of the lung has been estimated to be 0.2% of all pulmonary neoplasms (7,8). Shal et al. reported five cases out of 185 benign endobronchial tumors (2.7%) to be either schwannoma or neurofibroma (9).

Schwannoma is typically single, circumscribed, encapsulated tumor attached to a nerve, but containing no axon (4). Grossly it is firm, and grayish in color, and it has a whorled pattern on a cut section. Regressive changes observed inside, such as fatty degeneration, hemorrhage and cystic formation, are frequently recognized due to its large size (10). Microscopically, they have regions of high and low cellularity in HE stain, called Antoni A and B areas, respectively. Foci of palisaded nuclei, called Verocay bodies, may be present in the Antoni A tissue. Immunohistochemical stains always revealed strong uniform positivity for S-100 protein (4,11,12).

The association between primary neurogenic pulmonary tumors and Von Recklinghausen's disease is well known. This syndrome, which is basically due to a defect in the development of schwann cells, is caracterised by the presence of multiple neurofibromas in the skin and internal organs (7). On the other hand, schwannoma is usually solitary and rarely associated with Von Recklinghausen's disease (11,13). There was no evidence of Von Recklinghausen's disease in our patient.

The radiographic feature of peripheral intrapulmonary schwannoma is a round mass with well defined margin. When the tumor is located proximally to the lobar bronchus, atelectasis or pneumonia are sometimes observed (12). The CT features of schwannoma are a well-demarcated, low density mass before contrast injection, and there is homogeneous and excessive contrast enhancement after contrast injection (11). However, these features are not specific for schwannoma. In our patient while chest X-ray was normal, CT revealed rounded opacity adjacent to the right lower lobe, about 10 mm in diameter. So thorax CT should be taken in massive hemoptysis cases while chest X-ray is normal.

The clinical course depends on the degree of bronchial obstruction and the tumor size attained (1). On the other hand most peripheral intrapulmonary schwannomas were asymptomatic, being discovered during routine radiography (12). Symptoms are usually mild, consisting of cough, chest pain, fever and hemoptysis. Sometimes central localized lesions are presented with severe dyspnea (14). Massive hemoptysis occuring in patients with intrathoracic schwannoma is extremely rare (1,13). Chen et al. described a case of endobronchial schwannoma presenting massive hemoptysis (13). The cause of massive hemoptysis in the reported case seemed to be tumor bleeding and may be due to inflammatory changes in the neighboring pulmonary parenchyma. This inflammatory changes may be due to complication related to bronchiectasis or infected tumor.

Although the standard therapy for endobronchial neurogenic tumor had been a surgical resection, endoscopic treatment has been reported since 1983 (6). Because of their benign nature, minimally invasive treatment should be advocated. Removal by fiberoptic bronchoscopy forceps or intrabronchial resection with a Nd-YAG laser can be chosen; but local recurrence is also reported due to inadequate eradication (4).

In those with undiagnosed pulmonary lesions, peripheral destructive lung disease due to long-term atelectasis or pneumonia, and extrabronchial growth, surgical treatment should be choice of therapy (6). In our case, repeated attacks of massive hemoptysis was not prevented by bronchoscopic procedures and then lobectomy of the right lower lobe was carried out.

Primary schwannoma of the lung is predominantly benign, with minimal tendency to recur and show good prognosis after resection (3). Our patient is still alive and well eight years after surgery.

To our knowledge, our patient is second case presented with massive hemoptysis in literature. In conclusion endobronchial schwannoma may be added into the list of differential diagnoses for massive hemoptysis.

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