Case Report
JCAM

Expectoration of Tracheobronchial Grass Inflorescence Mimicking a Chest Wall Tumor

Göğüs Duvarı Tümörünü Taklit Eden Trakeobronşial Pisi Pisi Otunun Ekspektorasyonu

Expectoration of Tracheobronchial Grass Inflorescence

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Özet

Bu olgu sunumunda, 19 yaşında, sağ göğüs yan duvarda şişlik, yan ağrısı, geceleri yükselen ateş şikayetiyle tetkik edilen erkek bir hasta aktarılmaktadır. Göğüs bilgisayarlı tomografisinde; sağ akciğerde alt lob lateral bazal segmentte atelektazi ile uyumlu periferik konsolidasyon ve bu seviyeden başlayan ve inferiora doğru devam eden plevra ve göğüs duvarı yerleşimli irregüler sınırlı bir lezyon saptanarak göğüs duvarı tümörü ön tanısıyla kliniğimize yönlendirildi. Enfeksiyon bulgularının olması nedeniyle antibiyotik başlandı ve eş-zamanlı olarak ince iğne aspirasyon biyopsisi yapıldı. Biyopsi sonucu "kuşkulu sitoloji" olarak bildirildi. Antibiyotik tedavisine klinik ve radyolojik olarak yanıt veren hasta, izlem sırasında yabancı bir cisim ekspektore etti. Ekspektore edilen bu yabancı cismin patolojik inceleme sonucu "bitkisel nitelikte, pisi pisi otu" olduğu rapor edildi. Literatürde pisi pisi otu aspirasyonu sonrası, bu otun doğası gereği distale doğru migrasyonla göğüs duvarından dışarı çıktığı olgular yer almaktadır. Fakat olgumuzda olduğu gibi pisi pisi otunun göğüs duvarı tümörünü taklit eden enflamasyona neden olup sonrasında ters yönde hareket ederek ekspektore edildiği bir yayına rastlanmadığından, ilginç olduğu düşünülen bu olgu sunulmaktadır.

Anahtar Kelimeler

Göğüs Duvarı; Tümör; Ekspektorasyon; Pisi Pisi Otu

Abstract

In this case presentation, a 19-year-old male patient was examined because of complaints of right lateral chest swelling, lateral pain, and high fever at night. After a chest CT, the patient was directed to our clinic with a pre-diagnosis of chest wall tumor following the detection of peripheral consolidation concurrent with atelectasis in the lower lobe lateral basal segment in the right lung and a lesion with irregular contour in pleura and the thoracic wall, starting at this level and descending to the inferior. Because the symptoms pointed to infection, antibiotic therapy was started and a fine-needle aspiration biopsy was concurrently performed. Results of the biopsy were reported as "suspicious cytology." The patient, who responded to antibiotic therapy both clinically and radiologically, expectorated a foreign body during monitoring. Pathological examination reported "in herbal quality, grass inflorescence" as the traits of the expectorated body. In the literature there are cases in which grass inflorescence, in accordance with its nature, passed distally out of the chest wall with migration following the aspiration. However, no other publication has reported an intriguing case such as ours, in which the grass inflorescence caused inflammation that mimicked a chest wall tumor and then was expectorated moving in the opposite direction.

Keywords

Chest Wall; Tumor; Expectoration; Grass Inflorescence

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Introduction

It is known that if a foreign body that has aspirated into the tracheobronchial system remains there too long, intrathoracic pathology may occur. There are publications that report pulmonary foreign body aspirations causing a number of diseases such as bronchiectasis, obstructive emphysema, recurrent pneumonia, bronchial stenosis, lung apnea, pleural effusion, emphysema, bronchopleural fistula, endobronchial polyp, and rib osteomyelitis [1,2]. The patient who was directed to our clinic with the diagnosis of chest wall tumor demonstrated a bizarre incident with his unexpected diagnosis.

Case Report

A 19-year-old male patient had a chest CT after his admission to the hospital with complaints of fatigue, right lateral pain, high fever at nights, and lateral right chest wall swelling. The patient was directed to our clinic after the detection of peripheral consolidation concurrent with atelectasis in the lower right lobe at lateral basal segment level and hypodensity with limited contour in the pleura and chest wall, starting from this level and descending to the inferior (Image 1). Patient had no relevant occurrences in his medical background; his family history showed hypertension in the mother and lung cancer in the grandfather. Physical examination showed decreased breathing sounds in the lower right zone and a fixed, stiff mass lesion on the right lateral chest about 5 cm in diameter. The lab workup resulted in pathological values of CRP: 9.78 mg/dL, leukocyte: 11.490/mm3.

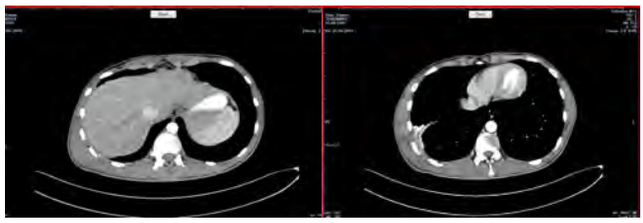


Figure 1. CT image at the initial hospital admission. (a) Mass lesion with irregular contour that suggests chest wall tumor , (b) lower lobe lateral basal segment level atelectasia concurrent image .

Ultrasound-assisted fine-needle aspiration biopsy was performed on the swollen spot upon the chest wall. Pus fluid was aspired and the samples were sent to microbiology and pathology for examination. Microbiologic examination revealed no generative activity and found ARB (-). Pathological examination, on the other hand, reported "suspicious pathology" (Dyskaryotic cell assembly was observed between assembly of leukocyte with suspicion of polymorph nuclei.) The patient was again evaluated by CT following ten days of antibiotic therapy. In the controls, the following were monitored: endobronchial soft tissue in the subsegmental area in right lung lower lobe anterior basal segment level and consolidation and atelectasis in the distal; neighboring pleural thickening; asymmetric thickening in chest wall muscle planes in the right 10th costa lateral contour level and 10th intercostal space compared to the left lobe. This thickening demonstrated dimensional regression when compared with the chest CT prior to antibiotic therapy and monitoring of low-density collection regions inside the lesion showed regression (Image 2).

The patient was discussed in the bone council and was chosen

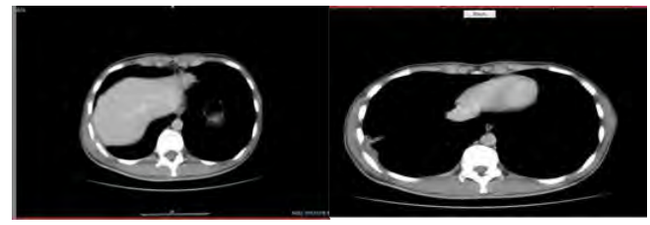


Figure 2. Control CT. (a) Monitored mass in the chest wall and (b) apparent dimensional regression in atelectatic area in lower lobe lateral segment .

for evaluation by chest magnetic resonance (MRG) imaging of the aspect of chest wall invasion. In the MRG, within the right hemitorax inferolateral wall, posterior, intercostal soft tissues, and the neighboring subcutaneous tissues, symptoms were identified that are compatible with inflammation, with undefined contours, 5x3 cm in size, and with focal fluid collection, beginning from this localization, pleural thickening regions in intrathoracic extrapleural distance (Image 3).

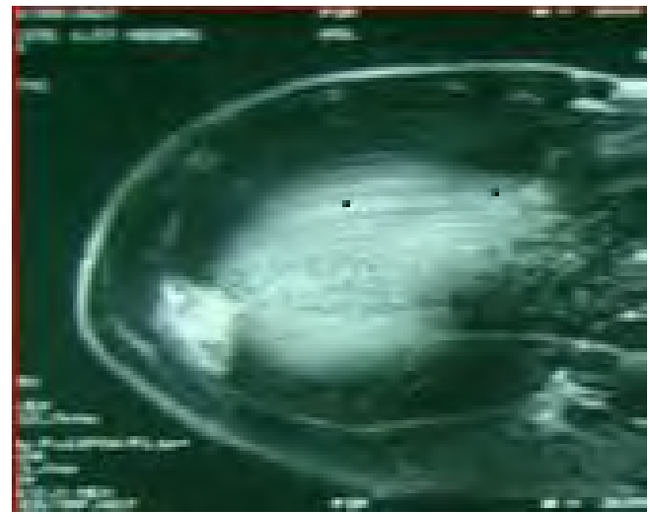


Figure 3. Chest magnetic resonance imaging. Inflammation symptoms monitored in subcutaneous tissues inside and neighboring intercostal soft tissues.

Tru-cut biopsy was performed because of the symptoms and the results were reported: "fibrosis and perivascular lymphocyte population between striated muscle tissues observed in skin and subcutaneous tissues."

During this period, the patient expectorated a foreign body. Pathological examination classified this substance as being of "herbal quality." A bronchoscopic examination observed no endobronchiallesions, reporting all as usual for the bronchial system.

With regressed infection parameters, normal body temperature, and pathological controls showing regression, the patient was discharged with oral antibiotics treatment and moved into follow-up.

Discussion: Any foreign body that is aspirated into the tracheobronchial system has, in the early periods, the ability to lead to complications such as acute dyspnea, asphyxia, hemoptysis, pneumothorax, laryngeal edema, and cardiac arrest.

In a study that examined 65 patients with a foreign body presence detected through flexible bronchoscopy, 30.6% of the patients reported delayed resolution pneumonia and 18.4% reported segmental bronchial collapse, as radiology results [3].

Another study that retrospectively evaluated 30 patients with foreign body aspiration diagnoses reported that five patients

without any history of foreign body aspiration who were operated on with pre-diagnoses of bronchiectasis and solitary pulmonary nodule, later received a foreign body aspiration diagnosis following the postoperative pathological examination [4]. The patient who was examined in our clinic with a pre-diagnosis of a chest wall tumor and accompanying pulmonary atelectasis and embolism was started on antibiotic therapy due to increased infection parameters, and subsequently responded well to the treatment. The infectious process that developed in the distal area in association with the endobronchial foreign body and that had reached the chest wall caused us to suspect malignity. The result of the fine-needle biopsy, "suspicious," supported this pre-diagnosis. However, the incident was shown to have developed in conjunction with tracheobronchial foreign body aspiration when the foreign body expectorated by the patient was examined during monitoring.

Substances with herbal origins rank high among aspirated foreign bodies. Among these, in our country, aspiration of watermelon pips, roasted chickpeas, sunflower seeds, hazelnuts, peanuts, and beans are frequently encountered. Metal and plastic objects rank second in the most frequently aspirated foreign bodies. Commonly aspirated metal objects are pins, sewing needles, and safety pins, along with push pins and nails. Commonly aspirated plastic objects are beads and pen lids [5]. Grass inflorescence and other herbs aspirated into the lung have been reported in the literature; however, most of these are either removed in the early period or diagnosed once complications like pneumonia, bronchiectasis, and emphysema develop. There are several publications reporting that grass inflorescence, by its nature, passes from the lungs to the chest wall, moving distally and then to outside the chest wall [6-8]. However, no publication reports a grass inflorescence that first caused inflammation mimicking a chest wall tumor, then unexpectedly moved in the opposite direction and was expectorated.

Competing interests

The authors declare that they have no competing interests.

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