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Asymptomatic Bronchogenic Cyst Revealed on Scanner for Covid19: A Case Report

Oussama Afandi[1*], Daher Bouchra[2], Amal MIQDADI[1], Nouhad Benmansour[1]

[1]Department of Thoracic Surgery, Cheikh Khalifa International University Hospital, Faculty of Medicine, Mohammed VI University of Health Sciences (UM6SS) Casablanca, Morocco
[2]Department of Pneumlogy, Cheikh Khalifa International University Hospital, Faculty of Medicine, Mohammed VI University of Health Sciences (UM6SS) Casablanca, Morocco

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***Corresponding author:** Oussama Afandi
Department of Thoracic Surgery, Cheikh Khalifa International University Hospital, Faculty of Medicine, Mohammed VI University of Health Sciences (UM6SS) Casablanca, Morocco

Abstract **Case Report**

Bronchogenic cyst represent are rare foregut abnormalities that arise from aberrant budding of the tracheobronchial tree early in embryological development. The clinical manifestations are varied and the certain diagnostic can only be made by anatomopathological examination which evaluates precise malignancy criteria. Total surgical removal is the only way to ensure a definitive cure. In Covid-19 era, most of patients with respiratory symptoms have benefit of a chest CT-Scan which allowed to discover coincidentally masses, or lung nodules for example. We report the case of a patient whom presented a subcarinal BC discovered incidentally. We report the case of 67-year-old man with a asmptomatoc bronchogenig cystoperated by videothoracoscopie with complete resection. Through this presentation, we would like to underline the rarity of this entity.

Keywords: bronchogenic cyst, thoracotomy, videothoracoscopie, thorasic surgery.

INTRODUCTION

Bronchogenic cysts (BC) are rare foregut abnormalities that arise from aberrant budding of the tracheobronchial tree early in embryological development [1]. These BC can compress adjacent structures, causing obstructive symptoms and complications or can remain asymptomatic [2]. In Covid-19 era, most of patients with respiratory symptoms have benefit of a chest CT-Scan which allowed to discover coincidentally masses, or lung nodules for example. We report the case of a patient whom presented a subcarinal BC discovered incidentally.

CASE REPORT

A 67-year-old man presented complaining of cough, dyspnea and fever of a week duration. He also gave history of hypertension, diabetes, and hypothyroidism well controlled under treatment. A Covid-19 infection was highly suspected by his doctor knowing he was in direct contact with positive patients. A Covid-19 test and a chest CT-Scan were requested. Both came back in favour of a Covid-19 infection. Moreover, chest CT-Scan showed images of an ovoïde mass in the middle mediastinum, with a water density (Figure 1, 2). A BC was highly suspected and a surgery was proposed.

A flexible bronchoscopy was requested as a pre-operative assessment and showed an extrinsic compression at the lower third of the esophagus.

In front of these elements, the patient was addressed to surgery before the development of any future symptoms. He was then admitted to the operating room for the excision of the BC in left lateral decubitus videothoracoscopy, the procedure consisted of a complete cystectomy. A gastric tube was placed with verification by a negative blue test (Figure 3,4). Postoperative consequences were simple removal of the drain after 2 days

Figure 1: Coronal CT section before injection of contrast product showing a water opacity pushing the left ear and the right lower pulmonary vein forward.

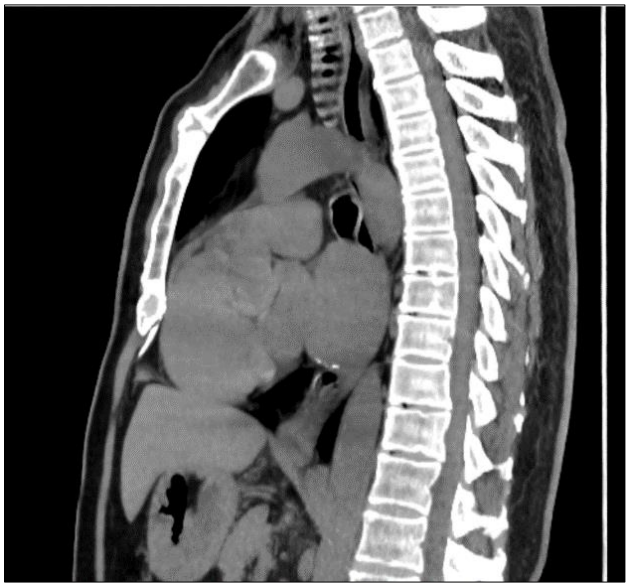

Figure 2: Sagittal chest CT section, after injection of contrast product, revealing a fluid opacity pushing the esophagus backward.

Figure 3: Intraoperative view of the cyst (black arrow)

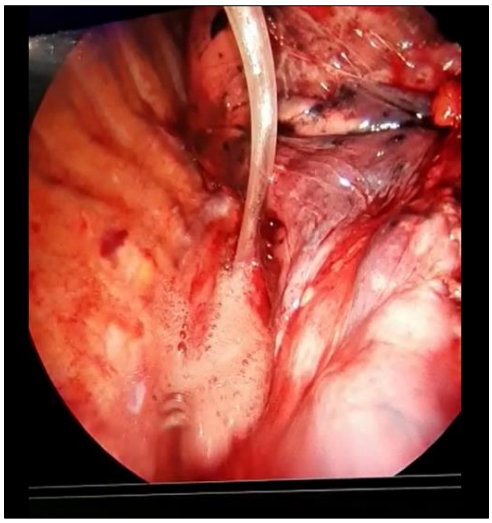

Figure 4: Intraoperative view after complete resection of the cyst

DISCUSSION

BC are usually located in the mediastinum [3]. Approximately 79% occur in the middle mediastinum as it was the case of our patient and the remaining BC are located either in the posterior mediastinum (17% of cases) or in the anterior mediastinum (3% of cases) [4]. They have a wide range of clinical manifestations and are generally causing symptoms of compression [3].

CT-Scan remains the main imaging exam requested for the diagnosis with a diagnostic rate of 60%-70% [5]. On the other side, magnetic resonance imaging (MRI) is highly sensitive and specific for BC but less used [4]. Indeed, it allows the identification of BC, which are characterized by high signal intensity on T2WI regardless of the cyst contents [5].

When BC are asymptomatic as it is the case of our patient, their management remains controversial [3]. The early diagnosis and treatment make operation possible before complications such as infections or even fibrosis in some cases. Treatment is based on a complete excision [3]. Surgical resection is the treatment of choice and the thoracoscopic surgery in the prone position is a feasible option for subcarinal BC [6, 7].

Furthermore, the development of antenatal diagnosis has changed the BC management allowing an earlier minimally invasive approach [3]. This could allow a better management of BC.

CONCLUSION

When a mediastinal BC is present, even if it is asymptomatic and due to an incident discover, the surgical resection remains the treatment of choice and prevents complications. Our case highlights the importance of an early diagnosis which allows a better management.

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