

Case Report

6 Year Old Boy with a Right Posterior Thoracic Mass

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Abstract

We reported of case on a 6 year old male with a bronchogenic cyst extending to right atrial wall. He presented with paroxysmal, chest typical pain continuing for one month. Contrast enhanced computed tomography showed a giant cystic mass with a diameter of 6,5 x 5,5 x 5,5cm in the right posterior hemithorax, compressing the right atrium. The treatment is surgical as it can undergo malignant transformation.

Keywords: Thoracic surgery; Bronchogenic cyst; Thoracotomy; Therapy; Diagnosis

Introduction

Bronchogenic cysts result from the abnormal or late budding of the ventral lung bud or the tracheobronchial tree during the process of the development. Primary Bronchogenic cysts of cardiac origin or extension are rare. Bronchogenic cysts can be detected in fetus or in stillbirths and it is well recognized in babies or infants. Bronchogenic cysts are rare lesions which originate from primitive tracheobronchial tree. They are primarily located in the thorax [1]. Extrathoracic locations may be either in the immediate vicinity of the thoracic cage or more remote periscapular location which is extremely rare. The clinical presentations are usually related to tracheal and tracheobronchial compressions. Typical localization of bronchial cysts has been reported for esophageal, pericardial, dermal cervical, diaphragmatic or intradural spaces, but such localizations are very rare [2].

Case Presentation

A 6-years old male with presented with chest typical chest pain, discomfort, paroxysmal palpitations continuing, for one month, cough, fever was admitted in our department with bronchogenic cyst extending to the right atrial wall. Physical examination, chest radiography, and blood analysis were found to be normal. The computed tomography (CT) confirmed giant cystic mass with a diameter of 6,5 x 5,5 x 5,5cm. Following standard a right posterolateral thoracotomy, we performed tumor enucleation and managed to resect the cyst from the atrial wall with the use of a side-biting clamp on the right atrial wall, which was repaired with continuous 4-0 polypropylene sutures (Ethicon, Somerville, NJ, USA). The patient was taken to the intensive care unit and weaned off mechanical ventilation in 6 hours. He was taken to the ward next day and discharged from the hospital on the postoperative 5th day. Microbiologic examination ended sterile and Bronchogenic cyst diagnosis was confirmed with detailed histopathologic examination. Grossly, the excised tumor measured 6,5 x 5,5 x 5,5cm and had multi-cystic features with turbid contents. Microscopically the tumor consisted of thin-walled multiple cysts attached to the respected myocardium. The inner cavities were lined with pseudo-stratified ciliated columnar epithelium and cartilages, which are characteristic features similar to those of normal bronchi and confirm a pathologic diagnosis of Bronchogenic cyst. The patient is followed regularly for

more than 1 year at the outpatient clinic, and he was found to be asymptomatic throughout the follow up period.

Discussion

Bronchogenic cysts are the most common cystic masses in the mediastinum. They arise from abnormal foregut malformations. They are most commonly an incidental finding on chest imaging. Although generally asymptomatic, they can rupture into adjacent structures or cause airway and vascular compression such as in our patient. Histopathology shows a thick wall that contains smooth muscle, glands, and cartilage. The treatment is surgical excision. A right posterolateral thoracotomy was adequate for resection in our case. Separation of the cystic wall from the right atrial wall was feasible with very limited atrial wall resection [3]. Bronchogenic cysts are most often symptomatic in childhood. These cysts may present with chest pain in the retrosternal area and with dysphagia, arrhythmias, hemoptysis, cough, fever. The resection of intrapericardial Bronchogenic cysts is possible [4].

Conclusion

In conclusion, due to the proximity of the vital structures,

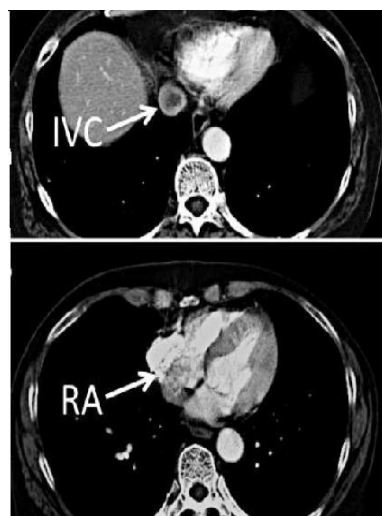


Figure 1: CT scan both shows the mass.

surgical treatment is an approved, useful, and safe procedure with low complication rates for the treatment of Bronchogenic cysts. Considering the risk of complications and even malignancy, Bronchogenic cysts require resection and should be performed when they are diagnosed. A case 6-years old male with Bronchogenic cyst extending to right atrial wall has been presented. The diagnosis made by chest radiograph and chest CT was confirmed.

References

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