Case study

BRONCHOGENIC CYST: A RARE CASE REPORT

ABSTRACT

Bronchogenic cyst are rare congenital malformations which arise from abnormal budding of primitive tracheobronchial tube and can localize either mediastinum or lung parenchyma. It may be said congenital if it is detected in early age group. They are incidentally detected mediastinal mass. Bronchogenic cyst are asymptomatic in most of the adult. We present a case of 55 year old female complaing of chest pain, heaviness, dypnea and cough since last one year.

KEY WORDS

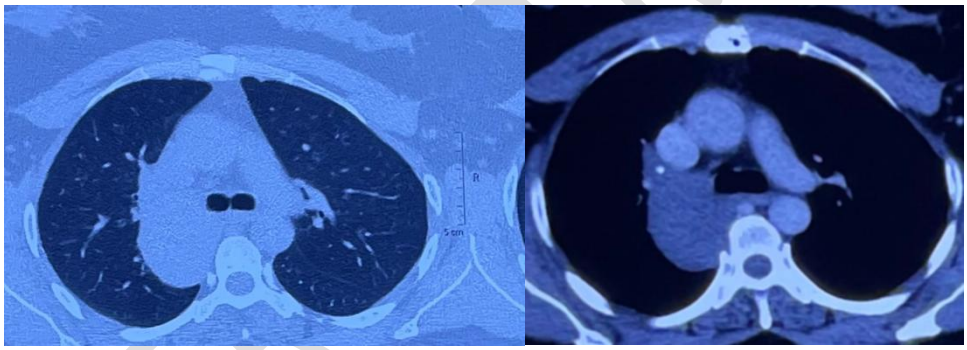
Bronchogenic cyst ,Mediastinal, Trachebronchial

INTRODUCTION

Bronchogenic cysts are rare congenital lesions accounting for only 5-10% of paediatric mediastinal mass. [1]. Bronchogenic cysts result from the abnormal or late budding of ventral lung bud or tracheobronchial tree during the process of development. Most bronchial branches form within 15 weeks of development of fetal life but they continue to divide and complete in eight year. Mediastinal bronchogenic cyst cannot be clinically detected usually until adult life [2].Bronchogenic cysts can be either intrapulmonary or mediastinal .About 70% of bronchogenic cyst produce some symptoms but 90% of mediastinal bronchogenic cyst are asymptomatic [3].Bronchogenic cysts are incidental radiographic finding in adult most common location being mediastinum 65-90% followed by lung parenchyma 15-20% [4,5]. The paratracheal or carinal types can produce symptoms due to compression of trachea and bronchi .Secondary infection can occur in mediastinal bronchogenic cyst.The cyst is lined by the ciliated ,secretory respiratory epithelium with cartilage ,smooth muscle ,fibrous tissue and mucous glands.

CASE REPPORT

A 55 year old female presented with complain of right side chest pain ,heaviness ,dyspnea on exertion MMRC grade 1 and cough since last one year .Patient was nonsmoker and no history of bio mass fuel exposure .Patient had no past history of HTN, DM ,Tuberculosis. Patient was frequently treated by oral antibiotics since last years but was not relieved .Routine investigations were advised and done. All blood parameters were normal. 2D Echo was normal with LVEF 55%.Patient CECT chest was done which revealed a large well defined non enhancing lesion seen on right side with broad base to the mediastinum seen in close relation to the right main stem bronchi ,the size of the lesion measures 48x42x56 mm and no haemmorrhage or calcification seen within the lesion rest of the b/l lung field appear normal. Fibreoptic bronchoscopy was done which showed there was no endobronchial growth and opening of all lobes were patent. Bronchoalveolar lavage was negative for afb ,cbnaat ,pyogenic culture and fungal culture. CT guided aspiration showed content to be transparent fluid negative for pyogenic culture, afb ,cbnaat and malignant cell cytology It only revealed inflammatory changes.



A. B.

Fig 1. CECT showing a large well defined non enhancing lesion. (precontrast HU 28, post contrast HU 32). Lesion is seen on the right side of mediastinum measuring 48*42*56(AP*Tr*CC)

A. Parenchymal window, B. mediastinal window

DISCUSSION

Bronchogenic cyst is rare congenital malformation. It results from abnormal or late budding of ventral lung and tracheobronchial tree. Bronchogenic cysts in early childhood present with noisy

breathing ,cough ,dysphagia, anorexia and a CT scan can confirm the diagnosis. Tracheobronchial compression and life threatening symptoms due to cyst enlargement are common in the pediatric population because of relative soft tracheobronchial tree. In adult most of the cyst are incidental radiographic findings and are asymptomatic. If the cyst become infected, rupture ,bleed or undergo malignant transformation patient can develop serious symptoms[6]. Common symptoms associated with bronchogenic cyst are cough, dyspnea ,chest pain and fever. Unusual presentation includes haemoptysis, pneumothorax and dysphagia. Superimposed cyst infection is usually the result of communication with the tracheobronchial tree. Intraparenchymal bronchogenic cyst is more likely to have connection with the tracheobronchial tree than mediastinal cyst and are more prone to infectious complications. In one of the largest reported series of 86 patients, St Georges et al. found only one infected mediastinal cyst[7]. Khalil et al .suggested surgical excision of cyst should be preferred because of the risk of future complications. According to Mawatari et al. the treatment should depend on the size and location of the cyst and adherence with the surrounding structures [8]. A small cyst, carinal in location and free from surrounding structures could be operated when diagnosed. operation sometime become complicated as there may adhesions with surrounding structures so complete separation become impossible and excision is only done when complication such as fistula formation ,bronchial ulceration ,bleeding or infection occur.

CONCLUSION

Bronchogenic cyst are rare mediastinal masses which may present with varied respiratory symptoms . Delay of treatment can lead to complications.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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