

## Full Thoracoscopic Resection of Mediastinal Bronchogenic Cyst in Adult

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**Article History**

Received: 02.01.2018

Accepted: 10.01.2018

Published: 30.01.2018

**DOI:**

10.21276/sjm.2018.3.1.3



**Abstract:** Bronchogenic cyst (BC) are rare tumours in the mediastinum, but well known to thoracic surgeon. We report a case of symptomatic mediastinal bronchogenic cyst (MBC) in adult who operated on by full thoracoscopy, and we discuss a surgical technic.

**Keywords:** Bronchogenic cyst, mediastinum, thoracoscopy.

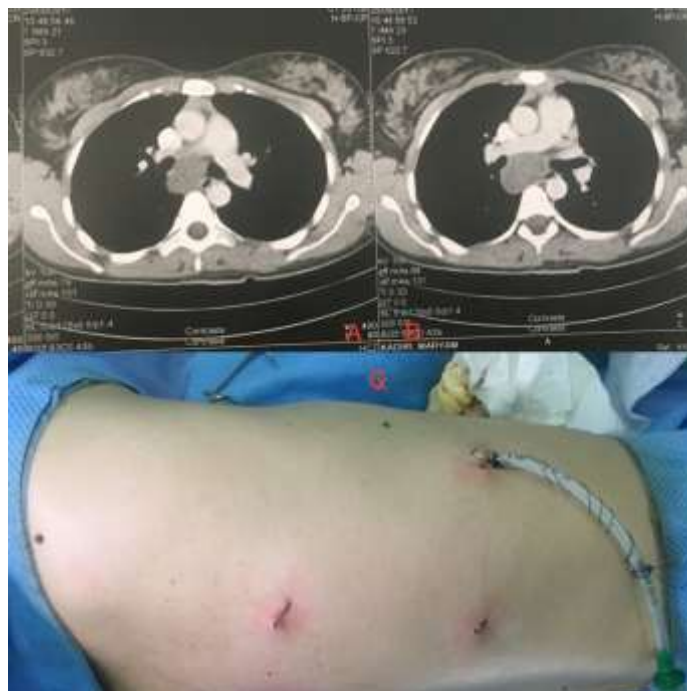
### INTRODUCTION

Bronchogenic cysts of the mediastinum are congenital abnormalities that can occur in infants, children, and also adults. Though benign by nature and sometimes asymptomatic, they can produce compression or irritation of adjacent structures, causing symptoms and complications [1].

The most common presenting symptoms are cough, fever and dyspnea. We discuss the case of a large bronchogenic cyst in the posterior mediastinum causing oesophageal compression with dysphagia.

### CASE REPORT

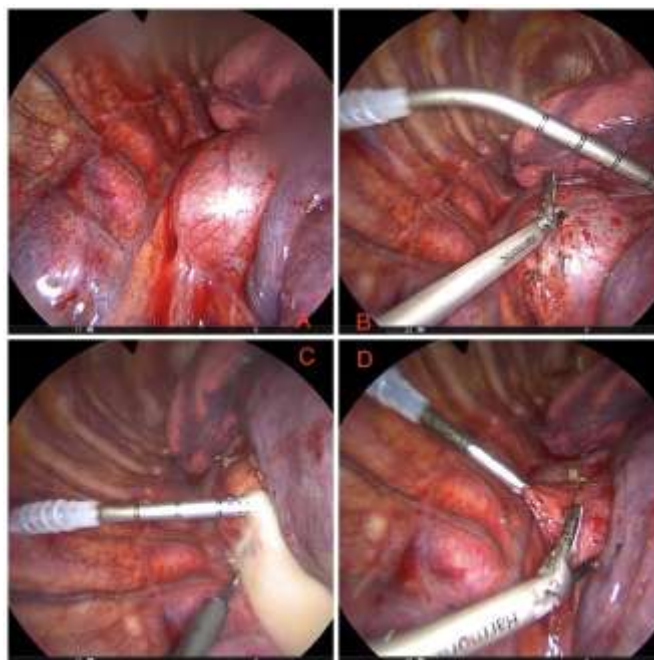
A 26-year-old woman was referred to our department for surgical resection of a mediastinal cyst. The patient was symptomatic and had past history of respiratory infection and dysphagia increasing over the years. The last computed tomography scan showed a cystic tumor of 45\_ 38\_ 43mm located in the right posterior mediastinum (sub carinal region), compressing and displacing the esophageal lumen (Figure 1). Resection was decided.



**Fig-1: A,B: CT scan showing a cystic lesion compressing and displacing the esophageal lumen  
C: Emplacement of the trocars**

The procedure was performed under general anesthesia with split ventilation using a double-lumen endotracheal tube. Patient was positioned in lateral decubitus as for a thoracotomy. The surgeon stood posterior to the patient for right side. Three ports were placed: one 10 mm trocar in the middle axillary line in the sixth intercostal space and two 5 mm trocars in the fourth and seventh intercostal space in the posterior

axillary line (figure 1). Only endoscopic instruments were used. The lesion appeared cystic with a well-defined capsule at the sub-carinal area. the intervention begins with the opening of the posterior mediastinal pleura. After dissection on both sides of the cyst, which showed intimate adhesions with the esophagus, the cyst was opened with issue of milky white fluid (Figure 2).



**Fig-2: Intraoperative pictures**

A : bronchogenic cyst.

B : opening the posterior mediastinal pleura.

C : milky white fluid.

D : resection of the cyst wall with harmonic scalpel.

A major portion of the cyst wall was excised and representative tissue was sent for histopathological examination. The chest tube was removed on postoperative day one, and the patient was discharged on postoperative day two. Histological evaluation confirmed the diagnosis of bronchogenic cyst.

## DISCUSSION

Bronchogenic cysts are the result of anomalous development of the ventral foregut; they are usually single but may be multiple and can be filled with fluid or mucus. BMC are usually asymptomatic, and often casually diagnosed. When present, symptoms are usually related to the area of occurrence.

Symptoms vary with age at presentation and up to a large extent depend upon the size and location of cyst. Common symptoms are chest pain ,dyspnea ,cough, stridor, due to tracheal/ bronchial compression and recurrent pneumonia. Unusual presentation includes dysphagia (one per cent), and Superior vena cava syndrome [1]. It is generally recommended that asymptomatic cysts in young patients be removed

because of the low surgical risk and the potential risk of late complications (albeit rare) such as infection, hemorrhage, or neoplasia within the cyst.

VATS treatment gradually became the first option also for BMC, The advantage of thoracoscopy treatment is evidenced by reduced discomfort for the patient. The decreased postoperative pain is a result of the lack of intercostal incisions. Hospital stay and chest tube duration are lower as compared to open thoracotomy [2].

Thoracoscopic access provided excellent visualization of the operative field, and dissection was facilitated by the use of the harmonic instrument. Thoracoscopy is a safe and effective method to deal with mediastinal bronchogenic cysts and involves considerably less morbidity than thoracotomy [1,2].

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