

Bronchogenic Cyst

(A Review and Report)

Fateme Parooei ¹, Zohre Mahmoodi ², Khadije rezaie keikhaie ³, Morteza Salarzai ¹

¹ Student of Medicine, Students Research Committee, Zabol University of Medical Sciences, Zabol, Iran.

² Department of Cardiology, Faculty of Medicine, Zabol University of Medical Sciences, Zabol, Iran.

³ Assistant Professor Of Maternal Fetal Medicine, Obstetric And Gynecology, Maternal And Fetal Health Research Center, Zabol University of Medical Sciences, Zabol, Iran

Abstract

Introduction: Bronchogenic cysts are benign and rare congenital lesions that develop from the inferior anterior intestinal tract that forms the respiratory system. These lesions occur in the fifth week or before the eighteenth day in the embryo. They mostly emerge near the main chest or bronchus, especially clinging to the posterior carina and posterior or medial mediastinum.

Methods: In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies Bronchogenic cyst. In this review, the papers published until early January 2017 that were conducted to study the Bronchogenic cyst were selected.

Presenting the patient: The patient is a 25-year-old woman who complained of chest pain. His skin suddenly began to have a sharp, daggered appearance, and he experienced heightened chest movement during breathing. Along with pain, he had a feeling of shortness of breath. Considering that a cyst containing connective tissue was reported with respiratory epithelial cells and serum-mucosal glands in the pathology of the lesion, the final diagnosis turned out to be secondary pneumothorax and rupture of Bronchogenic cyst.

Conclusion: Although lung parenchyma is not a common place in the development of Bronchogenic cyst, it is particularly important due to severe complications that can be associated with it. Since it is rarely possible to accurately diagnose preoperative conditions, it is necessary to perform resection of the lesion med in all suspected cases of bronchogenic cysts.

Keywords: Bronchogenic , cyst

INTRODUCTION

Bronchogenic cysts are benign and rare congenital lesions that develop from the inferior anterior intestinal tract that forms the respiratory system. These lesions occur in the fifth week or before the eighteenth day in the embryo. They mostly emerge near the main chest or bronchus, especially clinging to the posterior carina and posterior or medial mediastinum. These lesions are usually isolated and are found on the right near the middle line, but some other areas, like the left part, are also prone to this disorder. The bronchogenic cyst was categorized based on the location of the incidence by Maier in 1948, and they include carina, chest, esophagus, lung neoplasm, miscellaneous organs. These cysts account for 10% of the mediastinum masses in children. Bronchogenic cysts can also cause a lot of complications, the most common being upper respiratory tract infection. Cysts may have broken into the bronchi or trachea, and cause Hemoptysis. Photometric is also a non-edema disease that is usually accompanied by pleural inflammation and is often caused by the tearing of cysts into the pleural space. Although patients visit hospital, they do not respond to the usual treatment because they might be mistakenly diagnosed with pneumothorax. In addition, cysts may rarely develop malignant changes and produce bronchogenic carcinoma. Chest X-ray scan is a valuable method for diagnosing bronchogenic cysts. Cysts in spherical or elliptical masses are seen in flat and uniform dense walls, leading to lung abscesses in the graft. If a cyst is associated with bronchus, a level of air fluid is seen in it. The CT scan shows the size, shape, and position of the

cysts more closely in comparison to adjacent textures and tissues.

METHODS:

In this review article, the databases Medline, Cochrane, Science Direct, and Google Scholar were thoroughly searched to identify the studies Bronchogenic cyst. In this review, the papers published until early January 2017 that were conducted to study the Bronchogenic cyst were selected.

PATIENT

The patient is a 25-year-old woman who complained of chest pain. His skin suddenly began to have a sharp, daggered appearance, and he experienced heightened chest movement during breathing. Along with pain, he had a feeling of shortness of breath. But there was no cough, hemoptysis, or other sign; there was also no history of infection. In the physical examination, the patient was sitting forward on the curved face on the bed, slightly disturbed. No movements of anatomical deformation were observed during the examination of the chest. During surgery, a relatively large single cyst was seen inside the left lung parenchyma, connected to the bronchus. The lesion was completely removed and the cyst was sent to the laboratory for pathology diagnosis. Considering that a cyst containing connective tissue was reported with respiratory epithelial cells and serum-mucosal glands in the pathology of the lesion, the final diagnosis turned out to be secondary pneumothorax and rupture of Bronchogenic cyst.

DISCUSSION AND CONCLUSION

Bronchogenic cysts are congenital lesions that range from 2 to 10 cm in size and are often round and multi-hole. In microscopic bronchoscopy, each of the chest and bronchial tissues, such as fibro bone tissue, mucosal secretion ganglia, cartilage Smooth muscle and ciliated epithelium of the lacrimal mucous membrane secret or precipitate pithy epithelium. The fluid inside the cyst might have a dilator like water or gelatin; thus, these cysts have uniform density, a smooth and uniform edge and are round, like tear drops. If they develop during the first week of embryos, they are mediastinal and have nothing to do with the pulmonary system; if they develop later, they might involve airways and lung, but usually there is no relationship. The disease occurs at any age, from infancy to the seventh year of life, and in tends to be symptomatic in all children cases and 70% of adult cases. These cysts are rarely identified at the beginning of the birth, and the diagnosis is usually delayed until the cysts are large or infected. It often causes severe dyspnea, cyanosis, whiz, and stridor with airway pressure in infants, babies, and children. Although lung parenchyma is not a common place in the development of Bronchogenic cyst, it is particularly important due to severe complications that can be associated with it. Since it is rarely possible to accurately diagnose preoperative conditions, it is necessary to perform resection of the lesion med in all suspected cases of bronchogenic cysts.

REFERENCE:

1. Limaïem F, Ayadi-Kaddour A, Djilani H, Kilani T, El Mezni F. Pulmonary and mediastinal bronchogenic cysts: a clinicopathologic study of 33 cases. *Lung*. 2008 Feb 1;186(1):55-61.
2. Liang MK, Yee HT, Song JW, Marks JL. Subdiaphragmatic bronchogenic cysts: a comprehensive review of the literature. *The American surgeon*. 2005 Dec 1;71(12):1034-41.
3. Tölg C, Abelin K, Laudenbach V, De Heaulme O, Dorgeret S, Lipsyc ES, Aigrain Y, De Lagausie P. Open vs thorascopic surgical management of bronchogenic cysts. *Surgical Endoscopy And Other Interventional Techniques*. 2005 Jan 1;19(1):77-80.
4. Ustundag E, Iseri M, Keskin G, Yayla B, Muezzinoglu B. Cervical bronchogenic cysts in head and neck region: review of the literature. *The Journal of Laryngology & Otology*. 2005 Jun;119(6):419-23.
5. Behzadmehr R, Keikhaie KR, Pour NS. The Study of Pregnant Women's Attitude toward Using Ultrasound in Pregnancy and its Diagnostic Value based on the Demographic Features in Amir-al-Momenin Hospital of Zabol. *Int J Adv Res Biol Sci*. 2017;4(6):58-63.
6. Poureisa M, Behzadmehr R, Daghghi MH, Akhoondzadeh L, Fouladi DF. Orientation of the facet joints in degenerative rotatory lumbar scoliosis: an MR study on 52 patients. *Acta neurochirurgica*. 2016 Mar 1;158(3):473-9.
7. Daghghi MH, Poureisa M, Safarpour M, Behzadmehr R, Fouladi DF, Meshkini A, Varshochi M, Kiani Nazarloo A. Diffusion-weighted magnetic resonance imaging in differentiating acute infectious spondylitis from degenerative Modic type 1 change; the role of b-value, apparent diffusion coefficient, claw sign and amorphous increased signal. *The British journal of radiology*. 2016 Aug 11;89(1066):20150152.
8. Nemati M, Hajalioghli P, Jahed S, Behzadmehr R, Rafeey M, Fouladi DF. Normal Values of Spleen Length and Volume: An Ultrasonographic Study in Children. *Ultrasound in medicine & biology*. 2016 Aug 31;42(8):1771-8.
9. Kahkhaie KR, Keikhaie KR, Vahed AS, Shirazi M, Amjadi N. Randomized comparison of nylon versus absorbing polyglactin 910 for fascial closure in caesarean section. *Iranian Red Crescent Medical Journal*. 2014 Apr;16(4).
10. Kahkhaie KR, Keikha F, Keikhaie KR, Abdollahimohammad A, Salehin S. Perinatal Outcome After Diagnosis of Oligohydramnios at Term. *Iranian Red Crescent Medical Journal*. 2014 May;16(5).
11. Shahrazi Z, Keikhaie KR, Amjadi N, Bonjar ZH, Jahantigh H, Doosti F, Shirazi M. Correlation of 4 Hour Urine Samples with 24-Hour Urine Samples for the Diagnosis of Preeclampsia. *Journal of Obstetrics, Gynecology and Cancer Research*. 2017(In Press).
12. Mahmoodi Z, rezaie Keikhaie K, Salarzaei M. The relationship between main cardiac risk factors and acute myocardial infarction in the patients referring to Zabol Amir Al-Momenin Hospital in 2016. *Int. J. Adv. Res. Biol. Sci.* 2017;4(8):36-9.
13. Keikhaie KR, Kahkhaie KR, Mohammadi N, Amjadi N, Forg AA, Ramazani AA. Relationship between Ultrasonic Marker of Fetal Lung Maturity and Lamellar Body Count. *Journal of the National Medical Association*. 2017 May 11.