

LUNGS VARIATION DUE TO ABNORMAL DEVELOPMENT-A CASE REPORT

Deshpande Amol M.¹ Bhagwat Sachin S.² Jape Ravindra R.³

SUMMARY:

This is a case study of lung anomaly found at the time of dissection in Anatomy department. A cadaver of nearly 40 years old Indian male having changes in gross anatomy of both the lung. In which Left lung was seen membranous and has no fissures and a single lobes. In right lung upper and middle lobe expanded at its anterior border up to left axillary line, in such a way that only single lung was seen anteriorly.

Key Words: Anomaly of lung, Left lung, Right lung.

INTRODUCTION:

The respiratory system is meant, primarily, for the oxygenation of blood. The chief organs of the system are the right and left **lungs**. The right and left lungs lie in the corresponding halves of the thorax. They are separated from each other by structures in the mediastinum.^[1] In young, the lungs are brown or grey in colour. Gradually, they become mottled black. Each lung is conical in shape. It has apex, base, three borders anterior, posterior and inferior. Anterior border of right lung is vertical. In left lung anterior border shows wide cardiac notch. Lung has two surfaces- costal, medial. Medial is divided into vertebral and mediastinal. Right lung is divided into three lobes by two fissures, oblique and horizontal. Left lung is divided into two lobes by oblique fissure.^[2] In this case there is abnormal growth of right lung at its anterior border and shrunken, membranous structure that of left lung.

METHODOLOGY:

During a routine dissection at the Department of Anatomy at the CSMSS Ayurved Mahavidyalaya, Aurangabad, a rare anatomical variation in the lungs was observed. The cadaver donated to the Department of Anatomy, was that of a 40-year-old Indian man. After dissection of anterior wall of thorax the ribs were cut by rib cutter, scalpel etc. from mid axillary line.^[3] A hypertrophied right lung with pleura was seen anteriorly. After reflection of anterior border of right lung and heart with pericardium left lung was found posterior to the heart.

OBSERVATIONS:

After removal of anterior thoracic wall right lung was seen expanding to its anterior border up to left mid axillary line. Left lung was totally present at posterior side of the heart.

Right lung

Shape

- Anteriorly flat, upper lobe and middle lobe is expanded at its anterior border. [Figure 1]
- Posteriorly conical in shape.

Fissure: 2 oblique and a horizontal.

Horizontal fissure divide the lungs into upper and middle lobes and oblique fissure runs obliquely downward and then upward and meet transverse fissure at the level of 4th costal cartilage. Oblique fissure divide lung into middle and lower lobe.

Lobes

- Upper lobe is expanded from anterior border to left till mid axillary line.
- Middle lobe is expanded from anterior border to left mid clavicular line.
- Lower lobe forms the base of the right lung. [Figure 2]

Parts

- Apex is blunt and lies above the level of the anterior end of the first rib.
- Base is semilunar and concave and formed by lower lobe.

Borders: anterior border is not straight, long, thin, goes horizontal to left mid axillary line at the level of 4th intercostals space. Then it runs downwards and to the right to join the inferior border at median plane.

Surface: costal surface is large, convex, anteriorly flat and extended till left mid axillary line in upper part and till mid clavicular line in lower part.

Medial surface has two parts vertebral and mediastinal. Vertebral surface is concave and overlapping the vertebral column is related to the vertebral bodies and intervertebral

¹PG Scholar, ²Associate Professor, ³Professor, Dept. of Rachana Sharir, C.S.M.S.S Ayurved College, Aurangabad, Maharashtra.

Corresponding author email address:

deshpandeamol86@gmail.com

Access this article online: www.jahm.in

Published by Atreya Ayurveda Publications under the license CC-by-NC.

Received on: 13/10/14, Revised on: 13/11/14, Accepted on: 18/11/14

disc.

Mediastinal surface is related mediastinal septum.

Left lung

Left lung was shrunken, appeared as a membranous structure and was behind heart. [Figure 2]

Shape: It is triangular. Anteriorly concave and posteriorly convex.

Fissure: Fissure is not seen.

Lobe: No lobes seen. Single fibrous shrunken lung found.

Parts: apex is blunt but base is ill defined.

Borders: Anterior border is thin and vertical.

Posterior border is thick and ill defined.

Inferior border is absent.

Surface: Costal surface is small and convex. In medial surface vertebral part is absent and media sternal part is flat.

DISCUSSION:

It's a developmental anomaly in which left lung is markedly shrunken and membranous and placed posteriorly to the heart. So for the proper respiration, in right lung both upper and middle lobe is expanded to its anterior border and heart is shifted to the left side.

REFERENCES:

1. Sing. I. B. The Trachea, Bronchia and Lungs. In: Sing. I. B. (eds.) Text book of Anatomy. 5th ed. New Delhi: Jaypee Brothers Medical Publisher Pvt. LTD; 1995,p.383.

2. Chaurasia. B. D. The Lungs. In: Dr. Garg Krishna (eds.) Human Anatomy. 4th ed. New Delhi: CBS Publisher & Distributors; 1979,p.223-225.
3. Cunningham. D. J. The walls of the thorax. In: Romanes G. J. (eds.). 15th ed. New York: Oxford University press; 1893,p.12-18.

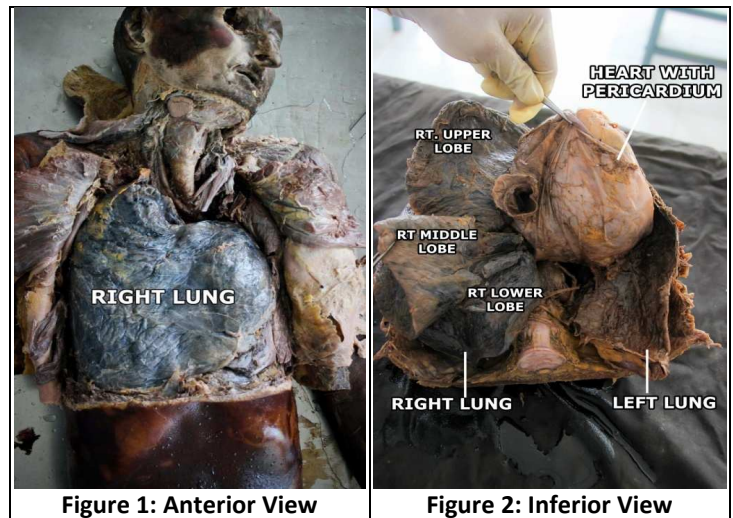


Figure 1: Anterior View

Figure 2: Inferior View

Cite this article as: Deshpande Amol M., Bhagwat Sachin S., Jape Ravindra R. Lungs variation due to abnormal development - A Case Report. *J of Ayurveda and Hol Med (JAHM)*.2014;2(8):29-30.

Source of support: Nil, Conflict of interest: None Declared