

Группа: 402Фк

Специальность: Лечебное дело

Дата: 24.09.2020

Тема: Lungs

Задание – прочитать текст, ознакомиться с новыми словами. Домашнее задание – ответить на вопросы.

Этап работы с текстом

1) введение новой лексики

New words

lungs – легкие

intrapulmonary bronchi – внутрилегочные бронхи

the primary bronchi – первичные бронхи

to give – давать

to rise – повышать

lobar bronchi – долевые бронхи

to divide – разделять

repeatedly – неоднократно

loosely – свободно

woven – сотканный

smooth – гладкий

submucosa – подслизистая оболочка

costal – реберный

surface – поверхность

convex – выпуклый

apex – вершина

to protrude – высовывается

superior – выше

right – право

left – оставленный

inferior – низший

innervation – иннервация

2) Чтение текста

3) Ответы на вопросы

Answer the questions.

1. What do the primary bronchi give?

2. For how many main branches in the right lung give primary bronchi rise?

3. For how many main branches in the left lung give primary bronchi rise?

4. What for lobar bronchi divide repeatedly?

5. What does mucosa consist of?

6. What is submucosa consist of?

7. What lung has a deep cardiac impression?

8. Where is the diaphragmatic surface (base) related?

9. How many pulmonary veins are there?

10. How are anterior and posterior pulmonary plexuses formed by?

Intrapulmonary bronchi: the primary bronchi give rise to three main branches in the right lung and two branches in the left lung, each of which supply a pulmonary lobe. These lobar bronchi divide repeatedly to give rise to bronchioles.

Mucosa consists of the typical respiratory epithelium and an underlying lamina propria similar to that of the trachea. However, a layer of loosely woven smooth muscle (muscularis mucosae),

which separates the lamina propria from the submucosa, is present.

Submucosa consists of elastic tissue with fewer mixed glands than seen in the trachea.

Anastomosing cartilage plates replace the C-shaped rings found in the trachea and extra pulmonary portions of the primary bronchi. These plates become progressively smaller as airway diameter decreases.

Bronchioles do not possess cartilage, glands, or lymphatic nodules; however, they contain the highest proportion of smooth muscle in the bronchial tree. Bronchioles branch up to 12 times to supply lobules in the lung, which are bounded by connective tissue septa. The smallest conducting bronchioles are called terminal bronchioles.

Bronchioles are lined by ciliated, simple, columnar epithelium with nonciliated bronchiolar (Clara) cells. Goblet cells are present in large bronchioles. A smooth muscle layer interlaces the elastic fibers of the lamina propria. The musculature of the bronchi and bronchioles contracts following stimulation by parasympathetic fibers (vagus nerve) and relaxes in response to sympathetic fibers. Terminal bronchioles consist of low-ciliated epithelium with bronchiolar cells.

The costal surface is a large convex area related to the inner surface of the ribs.

The mediastinal surface is a concave medial surface.

The left lung has a deep cardiac impression.

The mediastinal surface contains the root, or hilus, of the lung.

The pulmonary ligament is a double fold of pleura hanging inferior to the root of the lung.

The diaphragmatic surface (base) is related to the convex surface of the diaphragm. It is more concave on the right due to the presence of the liver. The apex (cupola) protrudes into the root of the neck. It is crossed by the subclavian artery anteriorly.

The hilus is the point of attachment for the root of the lung. It contains the bronchi, pulmonary and bronchial vessels, lymphatics, and nerves. Lobes and fissures.

The right lung is divided by the oblique and horizontal fissures into three lobes: superior, middle and inferior.

The left lung has only one fissure, the oblique, which divides the lung into upper and lower lobes. The lingula of the upper lobe corresponds to the middle lobe of the right lung.

Bronchopulmonary segments of the lung are supplied by the segmental (tertiary) bronchus, artery, and vein. There are 10 on the right and 8 on the left.

Arterial supply: Right and left pulmonary arteries arise from the pulmonary trunk. The pulmonary arteries deliver deoxygenated blood to the lungs from the right side of the heart.

Bronchial arteries supply the bronchi and nonrespiratory portions of the lung. They are usually branches of the thoracic aorta.

Venous drainage. There are four pulmonary veins: superior right and left and inferior right and left. Pulmonary veins carry oxygenated blood to the left atrium of the heart.

The bronchial veins drain to the azygos system. They share drainage from the bronchi with the pulmonary veins.

Lymphatic drainage: Superficial drainage is to the bronchopulmonary nodes; from there, drainage is to the tracheobronchial nodes.

Deep drainage is to the pulmonary nodes; from there, drainage is to the bronchopulmonary nodes.

Bronchomediastinal lymph trunks drain to the right lymphatic duct and the thoracic duct.

Innervation of Lungs: Anterior and posterior pulmonary plexuses are formed by vagal (parasympathetic) and sympathetic fibers. Para-sympathetic stimulation has a bronchoconstrictive effect. Sympathetic stimulation has a bronchodilator effect.