PROGRAM REALIZACJI ZAJĘĆ

Schedule for anatomy classes.

Przedmiot: ANATOMIA PRAWIDŁOWA

Human anatomy

Tematyka ćwiczeń.

Kierunek: LEKARSKI - semestr letni - moduł 5/7

Field of study: Faculty of medicine - spring semestr - part 5/7

THORAX

LABORATORY CLASSES 1

Wet lab classes with PBL and SGD (Classes will be conducted at the *Collegium Anatomicum*. Wet preparations. Classes implemented using VR, *Anatomage* and the „inverted spotters" method*)*.

1. **Vertebral column and skeleton of thoracic cage – repetition**
2. Orientation lines, points and palpable structures of thoracic wall: their names, location on the external surface of thorax.
3. Integument: skin, epidermis, dermis, subcutaneous tissue.
4. Joints of thoracic cage
   - Syndesmoses and synchondroses.
   - Synovial joints of thoracic cage: costovertebral joint, costotransvers joint, sternocostal joint, costochondral joint, interchondral joint.
   - Accessory elements, movements and classification of joints.
5. Topographic regions of the external thoracic wall
   - pectoral regions (presternal region, infraclavicular fossa, clavipectoral triangle,
   - pectoral region (lateral pectoral region, mammary region, inframammary region), axilla and axillary fossa.
6. Muscles of thorax: attachments, function (emphasis on respiratory action with division into main and accessory muscles of inspiration and expiration), blood vessels, innervation
   - Pectoralis major
   - Pectoralis minor
   - Serratus anterior
   - Subclavius
   - Intercostales externi and interni
   - Transversus thoracis
7. **Diaphragm:** structure, apertures (and their content), function, innervation and vascular supply.
   - parts (lumbar, costal and sterna part of diaphragm, central tendon)
   - aortic hiatus, esophageal hiatus, caval opening
   - fissurae of diaphragm.
4. Vasculature and nerves of the thoracic wall, spinal nerve
5. Thoracic cavity: General topography of its organs and great blood vessels
6. Breast (nipple, body of breast, mammary gland, suspensory ligament of breast, male breast, accessory breast)
   - Topography
   - Structure and its dependence on age
   - Arteries and nerves
   - Lymph nodes and lymph vassels.
7. General division of the mediastinum.

LABORATORY CLASSES 2

Wet lab classes with PBL and SGD (Classes will be conducted at the *Collegium Anatomicum*. Wet preparations. Classes implemented using VR, *Anatomage* and the „inverted spotters" method*)*.

1. Location of heart in thorax

PBL - Problem Based Learning
SGD - Small Group Discussion

LABORATORY CLASSES 1
LABORATORY CLASSES 2

- Relation to skeleton and neighbouring structures
- Asymmetry of heart chambers

2. External structure of heart
3. Internal structure of heart
   - Structure of heart chambers (atria and ventricles)
   - Septum of heart
4. Layers of heart wall
   - Epicardium
   - Myocardium
     - Fibrous skeleton of heart
     - Cardiac muscle
     - Conducting system of heart
     - Endocardium
5. Valves of heart: location, structure and function
   - Tricuspid valve
   - Mitral (bicuspid) valve
   - Aortic valve
   - Pulmonary valve
6. Projection of heart and its valves on the anterior wall of the thorax.
7. Auscultatory areas of valves.
8. Pericardium
   - Structure
     - Fibrous pericardium
     - Serous pericardium
   - Pericardial cavity and its sinuses - transverse and oblique pericardial sinus
   - Innervation
   - Blood supply.
9. Blood supply of heart
   - Coronary arteries
   - Cardiac veins

LABORATORY CLASSES 3

Wet lab classes with PBL and SGD (Classes will be conducted at the *Collegium Anatomicum*. Wet preparations. Classes implemented using VR, *Anatomage* and the „inverted spotters" method*)*.

1. Aorta
   - Parts and course
   - Branches arising in thorax
2. Superior vena cava and brachiocephalic veins
   - Origin
   - Course
   - Topography
   - Tributaries and places of drainage
3. Prenatal (fetal) circulation and its remnants in adult
4. Cervical and thoracic parts of sympathetic and parasympathetic autonomic nervous system
   - Sympathetic trunk
   - Vagus nerve: course and branches of the thoracic part and region of their innervation
   - Innervation of heart
5. Thymus
   - Structure and its dependence on age
   - Topography
   - Function
   - Blood supply
6. Lymphatic system – general structure.
7. Lymphatic drainage of the thoracic cavity and breast
   - Lymphatic vessels
     - Thoracic duct and right lymphatic duct
     - Bronchomediastinal trunks
   - Groups of lymph nodes of thoracic cavity

PBL - Problem Based Learning
SGD - Small Group Discussion

- Lymph nodes participating in lymphatic drainage of breast

8. Mediastinum -superior, inferior, anterior, middle, posterior
   - Contents of particular compartments

LABORATORY CLASSES 4

Wet lab classes with PBL and SGD (Classes will be conducted at the *Collegium Anatomicum*. Wet preparations. Classes implemented using VR, *Anatomage* and the „inverted spotters" method*)*.

1. Trachea and bronchi
   - Structure of wall
   - Division
   - Difference between right and left bronchi
   - Relation to skeleton and neighbouring structures
2. Lungs
   - External structure
     - Lobes and fissures of right and left lung
     - Hilum and root of lung
   - Bronchial tree division and structure
   - Pulmonary segments and lobules
   - Vasculature of lungs.
     - Pulmonary circulation (pulmonary arteries and veins)
     - Bronchial arteries and veins
     - Lymphatic drainage
   - Nerves of bronchi and lungs.
   - Projection of inferior margin of lungs on the external surface of the thoracic wall.
3. Pleura
   - Structure
     - Visceral pleura
     - Parietal pleura and its parts
   - Pleural cavity and its recesses
   - Blood supply and innervation

4. **Clinical Anatomy:** diaphragmatic hernia, percussion of lungs, mechanism of respirations (abdominal, thoracic, costal and diaphragmatic respiration), inferior borders of pleura, inferior borders of lungs, pneumothorax, hydropneumothorax.
5. Radiological anatomy: X-ray, CT, MR, Angiography, USG.

6. **REVIEW - THORAX**

CREDIT 5

Credit: THORAX - SPOTTERS / inverted spotters
Credit: THORAX - SCQ / MCQ

MCQ - Multiple Choice Question
SCQ - Single Choice Question

PBL - Problem Based Learning
SGD - Small Group Discussion