

BOGOMOLETS NATIONAL MEDICAL UNIVERSITY

Department of human anatomy

GUIDELINES

Student's independent work during the preparation to practical lesson

<i>Academic discipline</i>	HUMAN ANATOMY
<i>Module №</i>	1
<i>Content module №</i>	16
<i>The topic of the lesson</i>	Muscles of the neck
<i>Course</i>	Medical 1,2,3,4, military,dental
<i>Number of hours</i>	3

Kiev -2017

1. Specific objectives:

After completing the course, the student must know and be able to:

- 1.1. Classify the neck muscles.
- 1.2. Demonstrate the muscles of the neck.
- 1.3. Determine the places of the beginning and attachment of the neck muscles and their functions.

2. Basic level of training

Students must know and be able to:

- 2.1. Describe the anatomy of the cervical and upper three thoracic vertebrae, the upper two edges, the thorax, the outer base of the skull, the lower jaw, the hyoid bone, the collarbone and shoulder blades.
- 2.2. Describe the anatomy of the temporomandibular joint and joints forming the cervical vertebrae.
- 2.3. Determine the structure of the muscle as an organ.
- 2.4. Define the concept of "beginning" and "attachment" of the muscle.
- 2.5. Define the general principles for the classification of skeletal muscles.

3. Organization of the content of educational material

The training material is described in logical sequence with the involvement of structural and logical schemes, tables, drawings, which reflect the content of the main issues of the topic of practical classes.

4. Content of educational material

Neck muscles are arranged in several layers.

Neck muscles (superficial)

M.platysma is a thoracic fascia at the level of the I-II rib, which is edge of the lower jaw, parotid and chewing fascia, muscles of the mouth and lower lip. Takes the angle of the mouth down and back, pulling the skin of the neck, prevents compression of subcutaneous veins.

M.sterno-cleido-mastoideus is the front surface of the penis of the udder and the thoracic end of the collarbone Pineal appendix of the temporal bone and lateral time of the upper cardiac line of the occipital bone. With a one-sided contraction, the head and neck are tilted to his side, turning his face into an anti-lying side, with bilateral - throws his head back.

M. digastricus Front ventricle (venter anterior) - two-chest wall of the mandible; Rear abdomen (venter posterior) - Dorsal tip of temporal bone Both abdomen are connected by an intermediate tendon, which is attached to the body and the large horn of the hyoid bone. Tends up and back the hyoid bone. With a fixed ligament bone lowered the lower jaw.

M.stylohyoideus.Back end of the body of the sublingual bone. Tightens the hyoid bone up and back to its side.

Jaw-musculoskeletal muscle.

M.mylohyoideus is the jaw-hyoid line on the inside of the upper jaw. The lower two thirds of both muscles are centered on the midline, and the rear bundles are attached to the body of the subcutaneous bone. Rises to the sublingual bone, and with its fixation - lowered the lower jaw.

M. geniohyoideus. Skin of the lower jaw .Body of the hyoid bone Raises and pulls forward the sublingual bone, with its fixation - opens the lower jaw subcutaneous muscle of the neck (**musculi infrahyoidei**).

M .omohyoidea (venter inferior et venter superior), which are interconnected between an intermediate . The upper edge of the shoulder blade, medially from its incision (abdomen) Lower edge of the body of the hyoid bone (upper abdomen). Draws down and to the side of the hyoid bone, tightens the of the flattening of the cervical fascia.

M.snternohyoideus starts with the back surface of the penis, the thoracic end of the collarbone. The lower extremity of the body of the hyoid bone Lowers the hyoid bone

M.sternothyroideus starts with the posterior surface of the penis and cartilage arm and the edges of the corsa line of the thyroid cartilaginous larynx. Lowers the throat and hyoid bone

Deep neck muscles

Side group of deep neck muscles

M.scalenus anterior starts with prisms of the prickly processes of the II-VI cervical vertebrae .Tuberculum of the front ladder muscle on the upper face of the ribs.

All the ladder muscles raise the I and II ribs, participate in the act of inspiration. With fixed I and II verbs and bilateral contraction, the cervical spine of the spinal cord is bent forward, and in the one-sided direction, it is tilted to its side

M. scalenus medius. Transverse sprouts II-VII cervical vertebrae Top surface and edges, behind the spine of the subclavian artery

M.scalenus posterior. Back tubercles of transverse processes of IV-VI cervical vertebrae Upper edge and outer upper-II rib

M.capitis longus . Early tubercles of lateral processes of III-VI cervical vertebrae. Lower surface of the main part of the occipital bone near the pharyngeal mound. Tends the head and neck of the spine forward.

5. Methodology of organization of educational process in practical lesson:

5.1. Preparatory stage.

With the purpose of forming motivation for purposeful educational activity, the importance of the subject for further study in our department and at other departments of the university is emphasized, as well as for the professional activity of doctors of any specialty, but first and foremost, traumatologists, surgeons of various profiles, anaesthesiologists, neuropathologists.

Students will get acquainted with the specific goals and plan of the class. A standardized control of the initial level of knowledge of students is carried out.

5.2. The main stage

The main stage involves studying on demonstration material (on a troupe, drawings, drawings, photographs) under the direction of a teacher and using atlases and textbooks.

First, the groups of neck muscles according to the classification, which are described in textbooks and manuals, are determined. After that anatomy of the surface muscle of the neck is studied, then anatomy of the supraclavicular and sublingual muscles, then - anatomy of the deep muscles of the neck. At the same time, muscles are found on a dummy and other demo material. The positions of the beginning and attachment of the muscles are determined on the basis of the skull, lower jaw, hyoid bone, cervical vertebrae and upper two edges. The movements that are possible with reduced neck muscles are analyzed.

Oral questioning is accompanied by a demonstration of anatomical structures. Answers are discussed both by the students and the teacher.

5.3. The final stage.

- The current activity and activity of each student during the study is evaluated;

- Standardized control of students 'final knowledge on the control issues of the final level of students' training;

- Announced evaluation of the student's activity and exhibited in the journal of attendance records and student progress;

- The group leader lists the score in the record of success and attending classes by students, the teacher entrusts them with his signature, and puts them in an electronic journal.
- Teacher informs students with the content of the topic of the next lesson, recommended methodical methods of its preparation.

6. Attachments. Means for control:

- practical tasks concerning illustrations in the manual "Anatomy of a person. Control of independent preparation of students for practical classes »
- practical tasks concerning additional illustrations
- questions for controlling the basic level of knowledge of students
- A question for controlling the initial level of knowledge of students
- A question for controlling the final level of student knowledge
- test tasks of format A .

Practical tasks:

1. Practical tasks regarding illustrations in the manual "Anatomy of man. Control of independent preparation of students for practical classes »:
 - to work out in the manual different colors of the scheme and drawings in accordance with the subject of the lesson.

2. Practical tasks regarding additional illustrations

Questions for controlling the basic level of student knowledge:

1. Demonstrate on the typical cervical vertebra the body, transverse processes, the anterior and posterior tubercles of these processes.
2. Demonstrate the I and II edges, and on the first rib - the bunch of the front staggering muscle and the subcutaneous arteries and veins.
3. Demonstrate the breastplate handle.
4. Demonstrate on the skull the upper cardiac line, upper and seamy processes, upper, main part of the occipital bone and pharyngeal tubercle.

5. Demonstrate on the lower jaw a two-hole hole, the maxillo-sublingual line, and the optic spine.
6. Demonstrate parts of the hyoid bone.
7. Demonstrate the collarbone and its thoracic end.
8. Demonstrate the blade and its upper edge of the blade and scissors.
9. Name the joints that form the cervical vertebrae, and identify the movements that can be made in them.
10. Determine the movements that can be made in the temporomandibular joint.
11. Describe the structure of the muscle as an organ.
12. Define the concept of "beginning" and "attachment" of the muscle.
13. Identify the basic principles for the classification of skeletal muscles.

Questions to control the entry level knowledge of students:

1. Name the neck muscles that can raise the 1st and 2nd edges.
2. Name the muscle of the neck, which, with a double contraction, throws its head back.
3. Name the neck muscles that attach to the lower jaw.
4. Name the muscles of the neck, which begin with December.
5. Name the neck muscles that have an intermediate tendon.
6. Name the muscle from the supraclavicular muscles of the neck, which can not lower the lower jaw.
7. Name the muscle of the neck, which attaches to the cartilage of the larynx.

Question to control the final level of training:

1. Classify the neck muscles.
2. Demonstrate the hypodermic neck muscle and determine its start, attachment, and function.
3. Demonstrate the pectoral-clavicular-macular muscle and determine its origin, attachment and function.
4. Demonstrate muscles and determine their start, attachment, and function.
5. Demonstrate the submandibular muscles and determine their origin, attachment and function.
6. Demonstrate the muscles that make up the lateral group of deep neck muscles, and determine their origin, attachment and function.
7. Demonstrate the muscles that make up the middle group of deep neck muscles, and determine their beginning, attachment and function.

Test tasks "KROK-1"

1. To the doctor-pediatrician the mother asked about the fact that in her one year old child, her head is constantly turned to the left side. What muscle of the neck is underdeveloped in a child?

- A. Thoracic-clavicular-maculopathy muscle.
- B. Subcutaneous muscle.
- C. Double-breasted muscle.
- D. Long neck muscle.
- E. Shilo-sublingual muscle.

2. A patient, 55 years old, complains of pain when moving in the left half of the neck. The best position in which the patient does not feel pain - the inclination of the neck to the left with the simultaneous lifting of the head and the return of the face in the opposite direction. What function of the muscle is broken?

- A.M. stems from the death of a sinister.
- B. M. sternocleidomastoideus dexter.
- C. M. trapezius to the left.
- D.M. Trapezius on the right.
- E. M. sternohyoideus.

3. In a patient, a deep-cut wound along the first interrib space. What muscle of the neck is damaged?

- A. M. scalenus honey
- B. M. scalenus anterior.
- C. M. scalenus posterior.
- D.M. omohyoideus.
- E.M. sternocleidomastoideus .

Answers

1	2	3
A	A	C