Conclusions: Based on the comparison of topographic and anatomical peculiarities of the location and structure of the appendix, as well as of surgery in rabbits can be concluded that the use of rabbits as experimental animals formodeling appendectomy during practice-oriented training as analternative to engaging in exeperimental dogs is reasonable and will allow students to virtually secure knowledge of the topic and to gain practical experience of surgical intervention.

Keywords: Appendectomy, rabbits, experiment

12. INDIVIDUAL FEATURES OF THE AORTIC ARCH BRANCHES

Dovnar A., Bancevich V.

Scientific adviser: **Volchkevich D.**, Ph. D., Department of Normal Anatomy, Grodno, Belarus

Introduction: Human artery is characterized by marked individual differences. They are characterized by an unequal number of major vascular routes, sources of blood supply to organs, different shape and branching features topography. A high incidence of human circulatory system necessitates the use of frequent surgical and diagnostic procedures. In this regard, the question arises of more in-depth study of the vascular bed of the human body, including the arteries and variant anatomy, their topography and branching. It should be noted that in recent years the study of the arterial bed of the human body makes it increasingly possible to observe options vessels, unlike those described in classical textbooks, which, undoubtedly, can aggravate the course of the operation. Not in all cases can be performed preoperative angiographic diagnosis of arteries, so the physician should be prepared to the individual characteristics of the arterial bed. In the literature there is a description of the different data about option vessels other than classical. So, A.M. Ochkurenko (1966) in 13% of cases found that two arteries departed from the aortic arch: brachiocephalic trunk and left subclavian artery. Less common variants have been described in the literature, refer to the vertebral arteries from the aortic arch of, with more than the left. In this case the aortic arch gave four branches. R. L. Herzenberg (1930) an interesting variant described, in which the right internal and external carotid arteries departed from brachiocephalic trunk. In this case the common carotid artery was absent. Our study was conducted at the Department of the normal anatomy of the Grodno State Medical University. We examined 11 human cadavers of both sexes in different age groups (45-75 years). The research was carried out using the following methods: dissection, morphometry. On one of the studied drugs was discovered nonclassical variant of the branch of the aortic arch, in which there is no brachiocephalic trunk. Vessels departed from right to left in the following order: right common carotid artery, left common carotid, left subclavian, right subclavian. Right subclavian artery departed behind the left homonymous by 10 mm, turned right and passed between the trachea and the esophagus, thus bending the esophagus at the distance of 41 mm from its origin. Thus, analyzing the results, we can conclude that not only small and medium-sized arteries are subjected to considerable variability, but large main trunks, which certainly must be taken into account both in practical training sessions and in the practice of medicine.

Key words: Variant, artery, arch of aorta

13. SALIVARY CYSTATINS – BIOLOGICAL ROLE AND DIAGNOSTICAL VALUE

Ferdohleb Eugenia

Academic adviser: **Tagadiuc Olga**, MD, Ph. D., Associate professor, Head of Programs Department, State Medical and Pharmaceutical University "Nicolae Testemiţanu", Chişinău, Republic of Moldova

Introduction: Thispaper provides insights of the lateststudies regardingthe structure, properties andfunction of cystatins belonging to family II, salivary cystatinsin particular.

Materials and methods: Relevant articles on the topic for the period from 1996 to 2013 were analyzed, using PubMed database and the following key words: cystatins, cystein proteases, and salivary cystatins.

Results: Nowadays the cystatinsuper family is known to comprise about 30 members.The members of cystatin family II –cystatin C, D, S, SA, SN, E/M and F, are found in body fluids.Their involvement in inflammatory processes, cancerogenesis and metastasis, bone remodeling and in other processes has been undoubtedly demonstrated.Cystatins S, SN and SA were found in submandibular and sublingual glands, while cystatin D was detected only in parotid glands.Salivary cystatinsS, SN, SAand D contribute to the maintenance of the oral health through the inhibition of endo- and exogen cysteine proteases, antimicrobial and antiviral protection and regulation of hard tooth tissue remodeling.

Conclusions: Studies of major significance attest the clinical utility of cystatins' assay (cystatin C) for the diagnosis of some diseases (for ex. renal failure). In addition, cystatin C, among other cystatins, decreases the formation of osteoclasts by interfering at a late stage of pre-osteoclast differentiation.Cystatin D is produced by the parotid gland and is secreted through blood serum to the whole body, similar to a hormone, and thus there are setnew research directions of cystatins as markers of diseases, including the ones causing oromaxillofacial pain,prosopalgia, and the monitoring of disease's evolution and of treatment efficiency.

Key words: Cysteine proteases, cystatins, salivary cystatins,disease marker

14. GENETIC HETEROGENEITY OF DEAFNESS AND ITS PRACTICAL IMPLICATIONS

Filip Viorica

Scientific adviser: **Capcelea Svetlana**, M.D., Associate Professor, Molecular biology and Human Genetics, State University of Medicine and Pharmacy "Nicolae Testemitanu", Chişinău, Republic of Moldova

Introduction: The fundamental process involved in audition is controlled by hundreds of genes, 69 of which are known: 24 AD, 40 AR, 2XL, 3 mitochondrial. Mutant alleles of these genes may determine hereditary deafness. Loss of hearing is etiologically heterogeneous, 2/3 of childhood onset deafness being of a genetic cause. The prevalence of bilateral sensoneural deafness (≥40 dB) is 1:500 healthy new-borns. More than 50% of prelingual deafness is of genetic origin, 70% of which is nonsyndromic, from which 85% is autosomal-recessive. About 400 syndromes include deafness as a component of its phenotype. In Republic of Moldova, deafness hold 3rd place in the structure of disability, number of hearing impaired children being more than 2000.

Purpose and objectives: Analysis of molecular-genetic aspects of deafness and subsequent implications. Objectives were defined as: (1) systematic review of scientific literature regarding epidemiology, genetic heterogeneity, diagnosis and consequences of hereditary deafness; (2) analysis of deafness incidence in Republic of Moldova; (3) elucidating critically the practical implications regarding genotype variations of hereditary deafness.

Materials and methods: The study group was prospectively selected during 2013/14, from deaf patients at Republican Center of Audiology. Patients filled up a questionnaire at discharge. Additionally to cases (patients with hereditary deafness), were random selected an equal number of controls (patients with non-hereditary deafness).

Results: The study group consisted of 10 cases and 10 controls, with a mean age of 5±2,22 years, 65% females. Mean age of diagnosis was 2,3±1,49 years, being fit into maximal plasticity period of central auditory pathways. The count of sensoneural deafness in hereditary group represented 90%, with a single case of transmission hearing loss, bilateral in 90% of cases and 10% of controls, with a postlingual onset in 70%. Pedigree analysis of cases showed 90% AR transmission pattern, and 10% AD.

Conclusion: (1) The cause of deafness may be clinically suspected due to anamnesis and syndrome association, but substrate confirmation should be done with molecular-genetic tests. Although family history can help suspect the genetic cause of deafness, absence of hearing-loss anamnesis at family members does not mean that hearing impairment is not of genetic origin. (2) Recognition of genetic heterogeneity is important in clinical diagnosis, prognosis and genetic counseling regarding recurrence risk.

Keywords: hereditary deafness; connexin-26; sensoneural hearing-loss