

## Programme of lectures and practicals in Oral histology and embryology (OH) for the 2nd year of Dentistry

Lecturers: Prof. MUDr. RNDr. S. Čech, DrSc.; Doc. MVDr. A. Hampl, CSc., Mgr. J. Krivánek, Ph.D.

Seminar tutors: Prof. MUDr. RNDr. S. Čech, DrSc., Mgr. J. Krivánek, Ph.D.

### Lectures

<p>1. <b>18. 02. – 22. 02. 2019</b> Introduction: Content of subject, literature recommended for its study, requirements to the exam. <b>Oral histology</b> Orofacial system - its structural components and function. Anatomy of the oral cavity. Specialty of the oral mucosa, its structure and types: the lining, masticatory and specialized oral mucosa. Structure and function of taste buds.</p>
<p>3. <b>04. 03. – 08. 03. 2019</b> General structure and classification of salivary glands. Histology of major and minor salivary glands. Saliva. Notes to the comparative anatomy of teeth. Dentition: the tooth and surrounding structures - periodontal ligament, alveolus and gingiva. Methods used for study of hard tooth tissues (sections of decalcified teeth, tooth grindings, and SEM).</p>
<p>5. <b>18. 03. – 22. 03. 2019</b> General structure of dentin, types of dentin and its clinical importance. Microscopic</p>

### Practice

<p>2. <b>25. 02. – 01. 03. 2019</b> <b>Oral histology</b> Microscopic structure of lips, cheek, palate and tongue. <u>Slides:</u> labium oris, palatum molle, apex linguae, papilla vallata, radix linguae.</p>
<p>4. <b>11. 03. – 15. 03. 2019</b> <b>Written test.</b> Microscopic structure and identifying criteria of major salivary glands. <u>Slides:</u> gl. apicis linguae, gl. parotis, gl. submandibularis, gl. sublingualis. Explanation: Hard tissues of teeth - their physical properties, chemical composition, and origin. Microscopic structure of enamel, age changes, defects of amelogenesis and dental caries.</p>

<p>structure of cementum and its clinical importance; hypertrophy of cementum. Microscopic organization of dental pulp and its function, age-related changes of dental pulp.</p>	
	<p>6. <b>25. 03. – 29. 03. 2019</b> Tonsils (lymphatic ring of Waldeyer). Light microscopy of teeth. <u>Slides:</u> palatal tonsil, lingual tonsil. Longitudinal (or transverse) section of the decalcified tooth. Explanation: Microscopic structure of periodontal ligament, its function and clinical importance. Gingiva, gingival sulcus, mucogingival and dentogingival junctions, age changes and clinical implications.</p>
<p>7. <b>01. 04. – 05. 04. 2019</b> Differences in structure and composition of deciduous and permanent teeth. Microscopic structure of the alveolar process, clinical aspects of bone reaction in the alveolar process. Anatomy, histology and function of the temporomandibular joint, incl. age related changes.</p>	
	<p>8. <b>08. 04. – 12. 04. 2019</b> <b>Written test.</b> <b>Oral embryology</b> Definition of growth and development. From the fertilized ovum (zygote) to formation of germ layers, derivatives of germ layers. Folding of the embryo. Overview of development of the external appearance of the human conceptus. <u>Study aids:</u> Set of embryological pictures (I and II).</p>
<p>9. <b>15. 04. – 19. 04. 2019</b> <b>Oral embryology</b> Birth defects - their causes, incidence and terminology. The human embryo at the end of the 4th week. Head and neck of the embryo. Primitive mouth (stomodeum) and development of the face. Overview of facial clefts.</p>	
	<p>10. <b>22. 04. – 26. 04. 2019</b> <u>Exercise:</u> Recapitulation of congenital facial clefts on schemes, pictures and models. Explanation: Development of the oral cavity and vestibule. Development of the nasal cavities. Formation of the primary and secondary palates. Development of the mandible and maxilla. Overview of clefts of</p>

	the maxilla and palate. Development of the external nose including congenital defects.
11. <b>29. 04. – 03. 05. 2019</b> Development of the tongue and overview of its congenital malformations. Development of the major salivary glands. Description of the pharyngeal apparatus of the embryo. Pharyngeal (branchial) arches and their derivatives. Derivatives of pharyngeal clefts and pouches.	
	12. <b>06. 05. – 10. 05. 2019</b> <b><u>Written test.</u></b> <b><u>Exercise:</u></b> Recapitulation of palatal clefts and clefts of jaws. Derivatives of pharyngeal apparatus. <b><u>Explanation:</u></b> Overview of birth defects caused by maldevelopment of the branchial apparatus. Odontogenesis (tooth development). Ectoderm- ectomesenchymal interactions during tooth development, staging of tooth development. <b><u>Slides:</u></b> Demonstration of slides illustrating the early tooth development.
13. <b>13. 05. – 18. 05. 2019</b> Development of primary (deciduous) dentition, course of differentiation of ameloblasts and odontoblasts; crown and root formation. Deciduous tooth eruption - mechanism and timing. Development of the periodontal ligament.	
	14. <b>20. 05. – 24. 05. 2019</b> <b><u>Exercise:</u></b> Recapitulation of primary dentition development and eruption of teeth. <b><u>Explanation:</u></b> Development of secondary (permanent) dentition and its eruption. Period of mixed dentition. Development of the alveolar process. Overview of congenital tooth defects. <b><u>Credits.</u></b>
15. <b>27. 05. – 31. 05. 2019.</b> <b>Free topic</b> presented by Mgr. Křivánek (will be specified )	

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