

Under the certain circumstances on 5-th month after birth of the child the process of destruction of an epithelial sheath of Hertwig around of a tooth is broken. The development of what tissue of a tooth is prevented by this circumstance?

- A. Cementum
- B. Enamel
- C. Dental papilla
- D. Dental sac
- E. Pulp

During formation of a mantle dentine in a milky tooth the secretory activity of odontoblasts was broken. Formation of what fibers will be broken?

- A. Radial collagen fibers of Korff
- B. Elastic
- C. Reticular
- D. Transverse fibers of Ebner
- E. Nervous

In a dentine of a decalcified tooth of the adult man the sites with the disorder locating dentinal tubules and collagen fibrils are determined. Name this kind of a dentine.

- A. Secondary
- B. Primary
- C. Tertiary
- D. Dentine of milky tooth
- E. Dead ways

At embryonic development the superficial cells of a tooth papilla were damaged. The development of what tooth structure is disturbed?

- A. Dentine
- B. Enamel
- C. Cementum
- D. Periodontal ligament
- E. Cuticle of enamel

During embryogenesis of a tooth there was a damage of internal cells of a dental sac. Formation of what tooth structure will be broken?

- A. Cementum.
- B. Pulp
- C. Enamel
- D. Dentine
- E. Periodontial ligament

At inspection of the patient the development of a pulp of a tooth was disturbed. What embryonic source was damaged?

- A. Mesenchyme
- B. Ectoderm

- C. Endoderm
- D. Epithelium of oral cavity
- E. Dorsal mesoderm

On a tissue specimen of a section of a mandible of a 3,5-month's fetus the epithelial enamel organ surrounded by compactly posed mesenchimal cells is observed. Name this mesenchymal structure?

- A. Dental sac
- B. Pulp of an enamel organ
- C. Dental papilla
- D. Outer enamel cells
- E. Inner enamel cells

At embryogenesis of an oral cavity the development of tooth enamel was broken. What source of teeth development was damaged?

- A. Epithelium of an oral cavity
- B. Mesoderm
- C. Mesenchyme
- D. Dental sac
- E. Dental papilla

After formation of a dentine the process of inversion in cells - moving of nuclei and organelles occurs. What cells does this process concern?

- A. Ameloblasts
- B. Odontoblasts
- C. Preodontoblasts.
- D. Cementoblasts
- E. Cementocytes

At microscopical research of a mandible material the periodontal ligament is not fully developed. What is the source of periodontal ligament development?

- A. Dental sac
- B. Dental papilla
- C. Dental lamina
- D. Ameloblasts
- E. Ectoderm.

At a newborn during swallowing a part of milk is expelled through the nose and breathing is disturbed. At time of examination a cleft palate was revealed. What embryonic pathology leads to this?

- A. Unfusion of palate processes
- B. Unfusion of nasal and maxillar processes
- C. Unfusion of mandibular processes
- D. Unfusion of frontonasal processes
- E. Unfusion of frontal processes

Experimentally at a germ in a tooth germ the outer layer of a dental sac is destroyed decayed. What structure has no further development?

- A. Periodontal ligament
- B. Dentine
- C. Enamel
- D. Cementum
- E. Pulp

The child complains of bad tooth ache. The dentist revealed carious damage of enamel. Amount of what mineral substances decreases in a site of carious damage?

- A. Phosphorus, fluoride, calcium
- B. Sodium, calcium, potassium
- C. Potassium, phosphorus, fluoride
- D. Mg, fluoride, calcium
- E. Phosphorus, Mg, potassium

The dentine, forming the most part of a crown, neck and root of a tooth, is penetrated by radial tubules, in which there are processes of Toms. What are processes of Toms?

- A. Processes of dentinoblasts
- B. Processes of ameloblasts
- C. Intertubular dentine
- D. Fibers of Corf
- E. Fibers of Ebner

A child has abnormal formation of tooth enamel and dentin as a result of low concentration of calcium ions in blood. Such abnormalities might be caused by deficiency of the following hormone:

- A. Parathormone
- B. Thyrocalcitonin
- C. Thyroxin
- D. Somatotrophic hormone
- E. Triiodothyronine

During the formation of mantle dentin the synthetic activity of odontoblasts was disturbed, which will have an effect on the formation of the following fibers:

- A. Radial collagen Korff's fibers
- B. Tangential collagen Ebner's fibers
- C. Reticular
- D. Elastic
- E. Nerve

Histological specimen of a decalcified tooth represents richly vascularized loose fibrous connective tissue containing a variety of cells. Pyriform odontoblasts of this region are arranged in several rows. What kind of dental structure is it?

- A. Coronal pulp
- B. Root pulp
- C. Periodontium
- D. Mantle dentin
- E. Vasodentin

Histological specimen of mandible shows 10 tooth buds connected to the dental plate. Which element of tooth germ will develop out of them?

- A. Enamel organ
- B. Dental bulb
- C. Dental sac
- D. Enamel spindles
- E. Enamel pearls

In the histological specimen of a tooth germ the outer surface of the enamel organ is uneven, the cells of the inner layer show the reversal of polarity (inversion). These changes precede the beginning of the following process:

- A. Amelogenesis
- B. Dentinogenesis
- C. Pulp genesis
- D. Cementogenesis
- E. Periodont development

A histological preparation of multirooted tooth reveals polygonal cells with processes in the root bifurcation area. What cells and what dental tissues are characterised by these morphologic features?

- A. Cementocytes, cement
- B. Odontoblasts, enamel
- C. Enameloblasts, enamel
- D. Fibroblasts, pulp
- E. Cementocytes, dentine

A histological preparation of lower jaw shows dentin being formed. Collagenfibers synthesized by odontoblasts are thin and situated perpendicular to dentinal tubules. Whatfibers are being produced in dentin?

- A. Tangentialfibers
- B. Radialfibers
- C. Parallelfibers
- D. Sharpey'sfibers
- E. Perforatingfibers

On the longitudinal section of a tooth there are tubules visible in the dentin. What is inside these tubules?

- A. Processes of odontoblasts
- B. Processes of ameloblasts
- C. Odontoblast bodies
- D. Fibroblasts
- E. Elastic fibers

During formation of mantle dentin in a deciduous tooth there occurred a disruption of odontoblast secretory activity. Such disruption will affect the formation of the following fibers:

- A. Von Korff's radial collagen fibers
- B. Reticular fibers
- C. Elastic fibers
- D. Ebner's tangential collagen fibers
- E. Nerve fibers

A histological specimen represents an organ made up of skeletal crossstriated muscle tissue. The organ has cutaneous, intermediate, and mucosal sections. The skin of the organ is stratified squamous keratinizing epithelium passing into nonkeratinizing epithelium in the mucosal section. Specify this organ:

- A. Lip
- B. Hard palate
- C. Cheek
- D. Gum
- E. Tongue

A histological specimen represents a structure of the oral cavity, which is formed by bone tissue. It is covered by mucous membrane consisting of keratinizing stratified squamous epithelium. The structure has fatty, glandular and marginal zone. In all parts of the lamina propria the collagen fibers form thick bundles that penetrate deep into the periosteum. What kind of structure is it?

- A. Hard palate
- B. Gingiva
- C. Lip
- D. Cheek
- E. Tongue

A histological specimen of submandibular salivary gland represents basket cells from which some processes radiate and embrace the secretory unit. Contraction of the processes of these cells helps in expelling secretions from the lumen of secretory units and moving them to the system of excretory ducts. Name these cells:

- A. Myoepithelial cells
- B. Serous cells

- C. Mucocytes
- D. Adipocytes
- E. Epithelial cells

Loose fibrous connective tissue of salivary glands contains oval average sized cells which synthesize antibodies. The cells have round eccentric nucleus and "spoke-wheel" chromatin pattern made by small clumps of chromatin. What are these cells called?

- A. Plasma cells
- B. Adipocytes
- C. Neutrophils
- D. Fibroblasts
- E. Macrophages

A histological specimen represents a structure of the oral cavity, which is formed by bone tissue. It is covered by mucous membrane consisting of keratinizing stratified squamous epithelium. The structure has fatty, glandular and marginal zone. In all parts of the lamina propria the collagen fibers form thick bundles that penetrate deep into the periosteum. What kind of structure is it?

- A. Hard palate
- B. Gingiva
- C. Lip
- D. Cheek
- E. Tongue

Study of the histological specimen of a baby's primary tooth revealed hypoplasia (underdevelopment) of enamel. This abnormality is caused by the disruptions in the activity of the following cells:

- A. Inner enamel epithelium
- B. Pulp cells of the enamel organ
- C. Outer enamel epithelium
- D. Cells of the stratum intermedium of the enamel organ
- E. Odontoblasts

During the tooth development the enamel organ has prismatic cells with hexagonal intersection; the nucleus is situated in the central part of the cell. What cells are meant?

- A. Preenameloblasts
- B. Exterior enameloblasts
- C. Cambial cells
- D. Enamel pulp cells
- E. Preodontoblasts

A histological specimen represents a structure of the oral cavity, which is formed by bone tissue. It is covered by mucous membrane consisting of keratinizing

stratified squamous epithelium. The structure has fatty, glandular and marginal zone. In all parts of the lamina propria the collagen fibers form thick bundles that penetrate deep into the periosteum. What kind of structure is it?

- A. Hard palate
- B. Gingiva
- C. Lip
- D. Cheek
- E. Tongue

Study of the histological specimen of a baby's primary tooth revealed hypoplasia (underdevelopment ) of enamel. This abnormality is caused by the disruptions in the activity of the following cells:

- A. Inner enamel epithelium
- B. Pulp cells of the enamel organ
- C. Outer enamel epithelium
- D. Cells of the stratum intermedium of the enamel organ
- E. Odontoblasts

In the histological specimen of a tooth germ the outer surface of the enamel organ is uneven, the cells of the inner layer show the reversal of polarity (inversion). These changes precede the beginning of the following process:

- A. Amelogenesis
- B. Dentinogenesis
- C. Pulp genesis
- D. Cementogenesis
- E. Periodont development

A histological specimen presenting a tooth slice shows that the intercellular dentin substance contains collagen fibers being tangential to the dentinoenamel junction and perpendicular to the dentinal tubules (Ebner's fibers). This dentin layer is called:

- A. Parapulpal dentin
- B. Mantle dentin
- C. Granular layer
- D. Interglobular dentin
- E. Secondary dentin

Histological examination of trasverse enamel slice revealed linear banding in form of concentric circles that is pointing at an angle to the dentinoenamel junction.

Name these structures:

- A. Retsius' lines
- B. Hunter-Schreger's lines
- C. Enamel plates
- D. Enamel fascicles
- E. Enamel spindles

During the embryogenesis of oral cavity the development of dental enamel was disturbed. What source of dental development was damaged?

- A. Epithelium
- B. Mesenchyma
- C. Mesoderma
- D. Dental sacculle
- E. Dental papilla

A histological specimen of an oral cavity organ demonstrates that the organ's anterior surface is lined with multilayer squamous nonkeratinous epithelium, and its posterior surface - with multiserial ciliated epithelium. What organ is it?

- A. Soft palate
- B. Gingiva
- C. Hard palate
- D. Lip
- E. Cheek

In course of embryogenesis maxillary and mandibular processes grew together with a delay. What development anomalies should be expected in this case?

- A. Macrostomia
- B. Microstomia
- C. Cleft palate
- D. Gothic palate
- E. Cleft of superior lip

It was revealed that a 42 y.o. patient suffering from paradontosis had roundish calcified formations 2-3 mm in diameter in the coronal pulp. Name these structures:

- A. Denticles
- B. Interglobular spaces
- C. Sclerotic dentin
- D. Dead dentin
- E. Intertubular dentin

A child damaged the lateral surface of his tongue. What lingual papillas are most likely to be damaged?

- A. Foliate
- B. Conic
- C. Vallate
- D. Filiform
- E. Fungiform



A histological specimen of an eyeball shows a structure in form of a convexoconvex formation connected with the ciliary body by the fibers of ciliary zonule and covered with a transparent capsule. Specify this structure:

- A. Crystalline lens
- B. Vitreous body
- C. Ciliary body
- D. Cornea
- E. Sclera

A histological specimen of a mandibular gland shows an excretory duct. Mucous membrane of the duct is lined with cubic epithelium whose cells have weakly developed organelles. What excretory duct is it?

- A. Intercalated
- B. Striated
- C. Interlobular
- D. Common excretory
- E. -

Examination of a microspecimen made of an unknown organ revealed some acini that contained 10-15 cone cells with basophilic cytoplasm, round nucleus and well developed granular endoplasmic reticulum. An acinus is surrounded by a basal membrane with myoepithelial cells localized in its splitting. What organ is the slice made of?

- A. Parotid gland
- B. Pancreas
- C. Lungs
- D. Sublingual gland
- E. Liver

Examination of a tooth slice of a 42 y.o. man revealed on the dentinal-enamel border some solid linear fusiform structures as long as 1/3 of enamel depth. What structures were revealed?

- A. Enamel spindles
- B. Denticles
- C. Enamel fascicles
- D. "Dead" tracts
- E. Carious damage

There is a specimen of soft palate where both oral and nasal surfaces can be seen. It was revealed that oral cavity had damaged epithelium. What epithelium is damaged?

- A. Multistratal squamous nonkeratinizing
- B. Multistratal cubical nonkeratinizing
- C. Multistratal prismatic nonkeratinizing
- D. Multistratal squamous keratinizing

E. Multirowed ciliated epithelium

A histological specimen of mandible of an embryo shows a tooth germ with the dental papilla made up of small stellate basophilic cells. What tissue forms this part of the tooth germ?

- A. Mesenchyme
- B. Epithelial
- C. Reticular
- D. Cartilaginous
- E. Osseous

A histological specimen presents a developed tooth that has a coating resistant to acids, but it can be found only on the lateral surfaces of the tooth. What coating is meant?

- A. Cuticle
- B. Dentine
- C. Enamel pellicle
- D. Enamel
- E. Cement

Histological study of an extirpated pulp revealed some cylindrical cells in its peripheral layer. What are these cells called?

- A. Odontoblasts
- B. Fibroblasts
- C. Monocytes
- D. Ameloblasts
- E. Myofibroblasts

Before teeth come out, a solid tissue that looks like membrane reticulated bone appears on their roots. What tissue is it?

- A. Cement
- B. Dentin
- C. Enamel
- D. Loose fibrous connective tissue
- E. Dense fibrous connective tissue

Histological examination of trasverse ground section of an enamel revealed linear striations as an of concentric circles that is pointing at an angle to the dentinoenamel junction. Name these structures:

- A. Retsius' lines
- B. Hunter-Schreger's lines
- C. Enamel plates
- D. Enamel fascicles
- E. Enamel spindles

During the tooth development the enamel organ has prismatic cells with hexagonal intersection; the nucleus is situated in the central part of the cell. What cells are meant?

- A. Preenameloblasts
- B. Exterior enameloblasts
- C. Cambial cells
- D. Enamel pulp cells
- E. Preodontoblasts

During an embryogenesis maxillary and mandibular processes grew together with a delay. What development anomalies should be expected in this case?

- A. Macrostomia
- B. Microstomia
- C. Cleft palate
- D. Gothic palate
- E. Cleft of superior lip

Examination of a tooth ground section of a 42 y.o. man revealed on the dentinal-enamel border some solid linear fusiform structures as long as 1/3 of enamel depth. What structures were revealed?

- A. Enamel spindles
- B. Denticles
- C. Enamel fascicles
- D. "Dead" tracts
- E. Carious damage

Study of the histological slide of a baby's primary tooth revealed hypoplasia (underdevelopment) of enamel. This abnormality is caused by the disruptions in the activity of the following cells:

- A. Inner enamel epithelium
- B. Pulp cells of the enamel organ
- C. Outer enamel epithelium
- D. Cells of the stratum intermedium of the enamel organ
- E. Odontoblasts

In the histological slide of a tooth germ the outer surface of the enamel organ is uneven, the cells of the inner layer show the reversal of polarity (inversion). These changes precede the beginning of the following process:

- A. Amelogenesis
- B. Dentinogenesis
- C. Pulp genesis
- D. Cementogenesis
- E. Periodont development

During the formation of mantle dentin the synthetic activity of odontoblasts was disturbed, which will have an effect on the formation of the following fibers:

- A. Radial collagen Korff's fibers
- B. Tangential collagen Ebner's fibers
- C. Reticular
- D. Elastic
- E. Nerve

Histological section of a decalcified tooth represents richly vascularized loose fibrous connective tissue containing a variety of cells. Pyriform odontoblasts of this region are arranged in several rows. What kind of dental structure is it?

- A. Coronal pulp
- B. Root pulp
- C. Periodontium
- D. Mantle dentin
- E. Vasodentin

Histological slide of mandible shows 10 tooth buds connected to the dental plate. Which element of tooth germ will develop out of them?

- A. Enamel organ
- B. Dental bulb
- C. Dental sac
- D. Enamel spindles
- E. Enamel pearls

An electron microphotograph of an enamel organ shows a prismatic cell with developed granular endoplasmatic reticulum and Golgi complex. The apical part of the cell has Tomes process containing secretory granules and small vesicles.

Specify the cell:

- A. Secretory active ameloblast
- B. Pre-ameloblast
- C. External cell of an enamel organ
- D. Cell of enamel organ pulp
- E. Cell of intermediate layer of enamel organ

Harmful stimulations of tooth tissues resulted in formation of denticle structures along the peripheral zone of pulp. This phenomenon induces the following risk for the tooth:

- A. Loss of dentine regenerability
- B. Loss of pulp regenerability
- C. Loss of cement regenerability
- D. Loss of tooth innervation
- E. Loss of enamel regenerability

In the process of tooth tissue histogenesis dentin wasn't formed in time for some reasons. What process of further histogenesis will be delayed or will not take place at all?

- A. Enamel formation
- B. Pulp formation
- C. Predentinal space formation
- D. Cellular cement formation
- E. Acellular cement formation

A histological section of lower jaw shows dentin being formed. Collagen fibers synthesized by odontoblasts are thin and situated perpendicular to dentinal tubules. What fibers are being produced in dentin?

- A. Tangential fibers
- B. Radial fibers
- C. Parallel fibers
- D. Sharpey's fibers
- E. Perforating fibers

A histological slide of multirooted tooth reveals polygonal cells with processes in the root bifurcation area. What cells and what dental tissues are characterised by these morphologic features?

- A. Cementocytes, cement
- B. Odontoblasts, enamel
- C. Enameloblasts, enamel
- D. Fibroblasts, pulp
- E. Cementocytes, dentine

A histological specimen presents a developed tooth that has a coating resistant to acids, but it can be found only on the lateral surfaces of the tooth. What coating is meant?

- A. Cuticle
- B. Cement
- C. Enamel pellicle
- D. Enamel
- E. Dentine

During examination of a child's oral cavity a pediatrician established presence of inferior medial incisors. The child's development is normal. How old is the child?

- A. 6-7 months
- B. 8-9 months
- C. 10-12 months
- D. 13-14 months
- E. 18-24 months

Histological study of an extirpated pulp revealed some cylindrical cells in its peripheral layer. What are these cells called?

- A. Odontoblasts
- B. Fibroblasts
- C. Monocytes
- D. Ameloblasts

E. Myofibroblasts

Examination of a patient revealed abnormal development of enamel. This is caused by damage of the following structural elements of dental germ:

- A. Internal enamel epithelium of enamel organ
- B. Pulp of enamel organ
- C. Cervix of enamel organ
- D. External enamel epithelium of enamel organ
- E. Intermediate layer of enamel organ

During examination of a child's oral cavity a pediatrician found 8 incisors. The child's development corresponds to his age. How old is the child?

- A. 10-12 months
- B. 6-7 months
- C. 12-15 months
- D. 7-8 months
- E. 16-20 months

Underdevelopment of which parts of facial skeleton in the embryonal period is the reason for such a malformation as cleft palate?

- A. Palatine processes
- B. Frontal processes
- C. Frontal and maxillary processes
- D. Mandibular and palatine processes
- E. Mandibular processes

A histological specimen presenting a tooth ground section shows that the intercellular dentin substance contains collagen fibers being tangential to the dentinoenamel junction and perpendicular to the dentinal tubules (Ebner's fibers). This dentin layer is called:

- A. Parapulpal dentin
- B. Mantle dentin
- C. Interglobular dentin
- D. Granular layer
- E. Secondary dentin

Examination of a 42-year-old patient suffering from paradontosis revealed some roundish calcified formations 2-3 mm in diameter in the coronal pulp. Name these structures:

- A. Denticles
- B. Interglobular spaces
- C. Interglobular dentin
- D. Dead dentin
- E. Sclerotic dentin

Structure represented by mucosa and having a free portion and attached portion, which is tightly adherent to the periosteum defined in the oral cavity. Epithelium - stratified squamous keratinizing. Lamina propria forms a long, deep jutting out into the epithelium papillae. Call this structure.

- A. Gums
- B. Hard palate
- C. Lip
- D. Cheek
- E. Tongue

Morphological features of a gum are visible in the biopsy of a oral mucosa. What features of the structure of the mucous membrane of the gums can be observed in normal?

- A. Stationary adherent to the periosteum, lamina propria forms the high papillae, lack of muscle layer
- B. Low adherent to the periosteum, well defined muscle layer
- C. Absent of muscle layer, submucosa is well developed
- D. Property and muscle membranes are missing
- E. Holds a lot of small salivary glands

Canaliculi are visible in the dentin on longitudinal sections of the tooth. What is contained within the tubules?

- A. Processes of dentinoblasts
- B. Processes of enameloblasts
- C. Bodies of dentinoblasts
- D. Fibroblasts
- E. Elastic fibers

The inner layer of the epithelium of the enamel organ in the tooth germ was destroyed in animal experiment. The development of what tissue of a tooth is broken?

- A. Enamels
- B. Dentin
- C. Cement
- D. Pulp
- E. Periodontal

Depositions of hydroxyapatite crystals that look like globules are visible in histological slide of the tooth histogenesis. For which tooth tissue this type of mineralization is typical?

- A. Dentin
- B. Enamel
- C. Periodontal
- D. Cement
- E. Pulp

Which departments of the facial skull underdevelopment in the embryonic period leads to a malformation as "cleft palate"?

- A. Palatine processes
- B. Frontal process
- C. Frontal and maxillary processes
- D. Mandibular processes
- E. Mandibular and palatine processes

Tissue, located at the top of the tooth root and the point of branching of the roots, is visible in the thin section of tooth. The tissue contains cells with process lying in lacunae, and numerous collagen fibers having a radial or longitudinal direction.

Call this tissue.

- A. Cellular cement
- B. Retikulofibrous bone tissue
- C. Dentin
- D. Enamel
- E. Dense connective tissue

Non-mineralizing areas that are places for penetration of the infection into the tooth meet at the boundary of the enamel with the dentin. How this areas to call?

- A. Enamel bundles
- B. Enamel prisms
- C. Enameloblasty
- D. Dentinoblasty
- E. Fibers of Toms

There is the change of teeth at the 6-8-year-old children: deciduous are replaced by permanent. What embrionic tissues are the sources of formation of permanent teeth tissues?

- A. Ectodermal epithelium of a tooth plate and mesenhyme
- B. Mesodermal epithelium and mesenhyme
- C. Entodermal epithelium of a tooth plate and mesenhyme
- D. I, II brachial arches
- E. Entodermal epithelium and mesoderm