MINISTRY OF HIGHER AND SECONDARY SPECIALIZED EDUCATION OF THE REPUBLIC OF UZBEKISTAN
MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN
BUKHARA STATE MEDICAL INSTITUTE
NAMED AFTER ABU ALI IBN SINO

CHAIR OF THE PEDIATRIC DENTISTRY

TRAINING AND METODOLOGY COMPLEX OF THE SUBJECT OF

«PEDIATRIC SURGICAL DENTISTRY»

FOR V-YEAR STUDENTS

EDUCATION DIRECTIONS

Knowledge sphere	500 000 -	Health and Welfare
Education sphere:	510 000 -	Healthcare
Education direction:	5510400 -	Stomatology

Bukhara - 2019

The training complex was developed on the basis of the curriculum of the subject "Pediatric Surgical Dentistry" registered by the Ministry of Higher and Secondary Special Education in March 13, 2014, No. B 5510400-402.

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Methodical complex is made on the basis of the curriculum and the curriculum towards education 5510400 - Dentistry, about bsuzhden and approved by the Episcopal meeting .

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The training complex was discussed and approved at the Central Methodological Council of the Bukhara State Medical Institute.

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CHAIR OF THE PEDIATRIC DENTISTRY

"Approving"
Vice-rector for academic and
educational work
_____ G.Zh. Zharilkasinova
"_____" _____ _____2019 y.

Training and metodology complex
for students of 5 courses in the subject
" PEDIATRIC SURGICAL DENTISTRY**"**

Knowledge sphere	500 000 -	Health and Welfare
Education sphere:	510 000 -	Healthcare
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Annotation

This subject is intended for students of 5 course of medical institutes in this educational complex all of the main problems of surgical dentistry are covered. With the help of this educational complex students can improve their knowledge, skills and practices in the field of surgical dentistry

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Lecture number 1

Subject: CONGENITAL FACES OF THE FACE. ETHIOLOGY, CLASSIFICATION, CLINIC, TREATMENT METHODS, DISPENSIONIZATION

1.1. T echnology cal model of the formation

Lesson time: 2 hours	Number of students
Type of activity	Introduction of lecture news
Lecture plan	Familiarization with the topic
The objective of the training session	To study methods for treating congenital facial clefts.
Teaching methods	Conversation, visual aids for lectures
Type of activity	general - collective
Related Visual Aids	Textbook , lecture material , projector, computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

1.2. Technological map of lectures

Work stages	Teacher	Student
Preparation stages	1. The purpose of the lesson 2. Preparation of slides for lecture material 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children. Year of publication: 2005. 4. Vinogradova T.F. - Dentistry for children. M ., 1987 g of . 425 bet . 5. By Henry B. Clark - Practical Oral Surgery. Philadelphia., 1980y.	Listens and records
1. Introduction	The purpose and objectives of the lecture material : To master the etiology, classification, clinic, diagnosis and treatment of congenital facial clefts.	Are listening Answers student questions

	Consider questions of preliminary diagnosis and early preparation of patients .	
2 . Main stage	Introducing a slide show topic	Listen and record Listen
The final stage	Conclusion	Listens and records

Lecture Plan:

1. Consider e tiologi th innate x crevices face .
2. Consider a lassifikatsi th innate x crevices face .
3. Consider clinic innate x crevices upper lip s and palate .
4. Consider treatments innate x crevices face .
5. Consider principles clinical examination of patients with innate E crevices s face .
6. Consider clinic innate x crevices upper lip s and palate .

Keywords: *anomaly, a congenital cleft , upper lip , chiloplasty, heylorinoplastika, reheyloplastika, embryogenesis, exogenous nye factor s , endogenous nye factor s , Mill ard, Obukhov, Tennyson, Hagedorn, cleft palate, uraniscoplasty, veloplastika, columella, red border , prolabium, embryogenesis, atypical clefts, intermaxillary bone*

Lecture text

Classification of clefts of the upper lip and palate . Congenital malformations of the face are diverse in form and severity. The complexity of systematizing these defects is not so much in form as in the variety of combinations of changes in the dentofacial system, tissues of the pharyngeal ring of the nasal region, etc.

Many classifications are proposed . The more authors want to reflect the whole variety of forms of congenital malformations, the classification becomes cumbersome and inconvenient to apply.

In the textbook Kolesova A.A. Dentistry for children. The MMDS classification is simple and convenient for clinical use. At the Department of Pediatric Surgery and Dentistry clinic using tsya classification L.E.Frolovoy (1973).

1. Isolated cleft upper lip
2. Isolated cleft of the sky
3. Through cleft (upper lip and palate)
4. Atypical cleft face.

The first three groups have an index of the degree of cleft.

The degree indicates the magnitude and nature of the deformation. With increasing degree, the depth of cleavage increases. Depending on the degree, the corresponding deformation in the surrounding tissues is also determined. So, with

an increase in the degree with cleft upper lip, deformation of the nose becomes more pronounced.

Depending on the degree of cleft, changes in the pharyngeal ring are noted. The higher the degree of isolated cleft palate, the wider the pharyngeal ring. With the age of the child, these sizes can vary.

I a - hidden cleft of the red border of the upper lip

I b - cleft red border of the upper lip

II a - cleft red border and 1/3 of the skin of the upper lip

II b - cleft red border and ½ skin of the upper lip

III a - cleft red border s and skin. All that remains is a skin bridge in the area of the base of the nasal opening.

III b - cleft red border, skin, alveolar process.

With all forms of clefts of the upper lip, the circular muscle of the mouth is split, with an increase in the degree, these changes increase and with the Sh degree, it is divided in the area of the cleft throughout.

With a unilateral cleft, the side and degree are indicated, with a bilateral cleft - only the degree on one and the other side.

The isolated cleft of the sky has the following degrees:

I a - hidden cleft tongue

I b - clear cleft tongue

II a - cleft tongue and soft palate

II b - cleft tongue, soft palate , 1/3 of the hard palate

III a - cleft tongue, soft palate, ½ hard palate

III b - cleft tongue, soft palate and hard palate to the incisal opening.

With all forms of cleft palate, there are some degree of splitting of the muscles of the soft palate. The higher the degree of cleft, the more pronounced cleavage. In the forms of Pa, Pb, Sha, Shb, the muscles of the soft palate are completely split along the cleft line.

Through clefts (lip and palate) are divided into unilateral and bilateral. In turn, each group is divided into three degrees.

I - Unilateral through clefts are divided into the following three degrees:

cleft upper lip, alveolar ridge, hard and soft palate. The size of the cleft in the alveolar ridge does not exceed 5 mm .

P - cleft of the same tissues, the gap in the alveolar process is on average 1.2 $\pm$ 1.4 mm . A large fragment of the upper jaw in the frontal part is outwardly displaced up to 9 mm .

III - also a through cleft of the upper lip, palate. The gap is on average 1.3 $\pm$ 1.6 mm . A large fragment is as if cut off at the base of the septum. At this degree of cleft, there is an underdevelopment of the arch of the upper jaw by the size of the gap between the fragments .

Bilateral through clefts are divided into degrees:

1 - bilateral cleft of the upper lip, alveolar process on the right and left, palate. The maxillary bone is shifted forward by 8-10 mm , the distance between the lateral fragments and the maxillary bone does not exceed 4-5 mm on each side.

P. - a bilateral cleft of the upper lip, an avleolar process, the palate. The maxillary bone is displaced somewhat downward and protrudes forward to 4.2 ± 1.8 mm . The size of the gap on the right and left is 10-15 mm .

III - a similar splitting. The intermaxillary bone also projects forward by 20-30 mm . However, the lateral fragments are closely adjacent to the vomer, there is a significant protrusion of the intermaxillary bone and a mismatch between the size of the intermaxillary bone and the gap in the anterior alveolar arch. There is a sharp underdevelopment of the upper jaw in the transverse plane.

General patterns of development of man and other vertebrates

In the development of the human fetus, traits inherited from more distant and from immediate ancestors are difficult to combine. Such features of human embryogenesis, as the occurrence of a zygote as a result of fertilization, make people related not only to the entire animal world, but also to most plant organisms. This is the most ancient feature of development.

The sequence of the main stages of embryogenesis - fertilization, crushing, gastrulation, histo-and organogenesis, is common to the vast majority of multicellular animals.

The formation of the axial complex of embryonic primordia at a human embryo, the formation of a chord, the laying of a neural tube, the formation of gill pockets and crevices bring a person closer to representatives of chordates and are inherited from the most ancient common ancestors of the chords.

Segmentation and differentiation of the mesoderm, the formation of the initially cartilaginous, and then the bone skeleton reflect the evolutionary changes of the mesoderm derivatives, in particular, the skeleton in the series of vertebrates.

The egg of mammals and humans contains a very small amount of protein-lipid inclusions, therefore, the fragmentation is complete. However, the features of the meroblastic type of development are manifested in the asynchrony of fragmentation and the formation of the body of the embryo from part of the egg.

Extra-embryonic organs are inherited by humans from ancestral forms, but the function of some of them is transformed, the yolk sac, for example, performs a hematopoietic function, and not a repository of nutrients (as in reptiles).

New signs characterizing human development are egg yolk poverty, the presence of trophoblast, fetal development in the uterus, and live births.

For all placental mammals, including humans, the presence of the placenta, the menstrual cycle (for primates and humans), the early development and isolation of trophoblast, extra-embryonic mesenchyme is common. All these signs developed in evolution only among the closest ancestors of man - anthropoid apes.

However, there are a number of signs of development that are characteristic only for humans. The most important of them is the delay in the closure of the anterior end of the neural tube, which is associated with cephalization, a significant expansion of the anterior end of the neural tube. The powerful development of the brain leads to an extension of the terms of embryogenesis.

Thus, the complexity of the processes of human embryonic development is closely related to the general complexity of its organization that arose in phylogenesis.

The doctrine of the critical periods of human development

Embryonic development is possible only with an optimal combination of internal and external conditions. Each subsequent stage of development of the embryo or fetus follows from the previous and from the current development conditions. If any external or internal conditions are not enough, or if an unusual external factor arises that can dramatically affect the course of fetal development, embryogenesis may deviate from the normal path.

The results of classical studies by the embryologist P.G. Svetlov (1960) indicated two critical periods in the development of placental mammals associated with the period of implantation and placentation. However, these two periods do not exhaust the problem of critical periods. In the process of laying down each organ, there are also particularly sensitive periods when exposure to adverse environmental factors can cause one or another deviation in its development (i.e., an anomaly). In critical periods, the embryo or fetus becomes highly reactive and labile with respect to the action of external factors. Anomalies of development arise in this case due to the fact that the body's struggle with destructive processes (that is, the regulatory function of the organs and systems of the fetus) during these periods can be weakened. The immediate cause of the anomaly can be either a halt in the development of a particular body system in a critical period, or a violation of the coordination in the speed of the compensatory responses of the developing fetus systems. The earlier the embryo is at its earlier stage of development, the more its response to the action of a pathogenic factor is more different from the response of adult systems.

In human ontogenesis, the critical periods include: 1) fertilization; 2) implantation (7-8 days of embryogenesis); 3) the development of the axial complex of primordial organs and placentation (3-8 weeks); 4) the development of the brain (15-20 weeks); 5) the formation of the basic systems of the body, including the sexual (20 - 24th week); 6) birth; 7) period up to 1 year); 8) puberty (11 - 16 years).

The most common factors that interfere with normal embryogenesis are:

1. Overheating of the female reproductive cell, maternal metabolic disorders, hypoxia, the content of toxic substances in the blood of the mother (for example, drugs, narcotic substances, nicotine, alcohol, etc.), infection, especially viral.
2. For the development of warm-blooded animals and humans, body temperature is of great importance. Prolonged overheating of the mother's body leads to abnormalities in the development of the fetus.
3. X-ray irradiation is dangerous due to possible mutations, as the cells of embryonic primordia are especially sensitive to radiation.

The death of embryos at different periods of ontogenesis is uneven among the embryos of the male and female sexes: the closer to the beginning of pregnancy, the more among the dead embryos of the male sex. This is due to the fact that in

embryogenesis there are more male embryos than female ones. So, the ratio of the number of male and female embryos in the 1st month of pregnancy is 600: 100, and in the 5th month - 140: 100. If we consider that, on average, 300 fetuses die per 1000 pregnancies, then the value of intrauterine mortality is represented by the following indicators: 112 embryos die in the 1st lunar month, 72 in the 2nd, and 43 in the 3rd, and then they drop to single. That is, in the first two months of pregnancy, about 2/3 of all cases of embryo death occur.

The exact number of abnormally developing pregnancies at the zygote stage is unknown, since pregnancy is difficult to diagnose at this stage. It is approximately estimated that half of the pregnancies ending in spontaneous abortions are accompanied by chromosomal defects of the embryo. Such abortions are regarded as a "natural means" of eliminating embryos with genetic defects and reducing the number of congenital malformations. According to modern forecasts, due to spontaneous abortion of genetically inferior embryos, the number of newborns with congenital genetic defects decreases from 12% to 2 - 3%. Using in vitro fertilization methods and developing modern biological technologies, we are approaching the possibility of analyzing the state of the DNA of the embryos, preventing and correcting congenital pathology. The decoding of the human genome, which was reported on June 26, 2000 , is almost complete and will greatly contribute to this.

Pathological processes occurring in the mother's body during the first 7 days after fertilization can lead to ectopic (ectopic) pregnancy. The latter is 0.8 - 2.4 cases per 100 full-term pregnancies (about 6% of stationary gynecological pathology). In 98 - 99% of cases, the embryo attaches to the fallopian tube. Ovarian, cervical and abdominal forms of pregnancy are rare. Mortality in ectopic pregnancy is about 7% of all deaths of pregnant women. A history of ectopic pregnancy is a common cause of secondary infertility. The action of diverse pathological factors in early human embryogenesis can cause placenta previa and cystic drift. With the continued influence of adverse factors, many organs of the embryo are involved in the pathological formation, primarily the central nervous system, heart, and others. Only from 63 days of pregnancy the risk of developing embryogenesis abnormalities begins to decrease. All the facts presented above impose great obligations on future parents in terms of preventing the effects of harmful environmental factors and emotional stress on the pregnant woman's body, especially at a time when the fetus is in the early phase of development and the woman does not know about her pregnancy.

The use of drugs.

According to Nasrit dinova H.K. 66% of women who gave birth to children with clefts indicated the use of drugs. This is almost 3 times higher than in the control. Moreover, the effect in 1 trimester is especially pronounced . almost the same number of mothers of the observed and control groups indicated the use of drugs in the P and W trimesters.

Among the drugs used in the 1st trimester, antibiotics, sulfonamides and antispasmodics are in first place.

Corticosteroids, androgens, estrogens, antithyroid drugs, tranquilizers, antidepressants, antiestrogen drugs, antimalarial drugs, antipsychotics, anticoagulants, salicylic acid drugs, antibiotics - drugs that have the highest teratogenic activity.

Potential teratogenicity of a drug is also influenced by such factors as: 1) the time of administration of the drug, 2) the individual sensitivity of the patient to this drug, 3) the number of injections of the drug, and 4) the overall incidence of congenital anomalies when using this drug.

Furthermore, it is proved teratogenic floor of O hormones androgen, estrogen, insulin, cortisone, vasopressin adren and ling et al.

Social environment

According to Nasritdinov Kh.K. 1995 g of . of the examined contingent, 1/3 was born in families whose social category is "workers" 18% of children were born in families of "employees" 5% in families of students 29.8% in families of a mixed category, where one of the parents is an employee, the second worker.

The influence of the factor of production or life is not unique for urban and rural residents. So, according to the research of Nasritdinov Kh.K. (1995) in Tashkent, almost 78% of parents responded negatively to the influence of these factors. Of the total number of women who indicated the effects of harmfulness at work or at home, 65% noted their effects in the first trimester.

Zubova A.F. It held in 1970 80 g of . study on the effect of DDT on the birth rate of children with facial defects. In mothers of children with cleft faces, the concentration of DDT in breast milk ranged from traces to 1 mg / l, which was 60% higher than in mothers of children without cleft. Based on this Zubova A.F. considers carriage of DDT as one of the reasons for the birth of children with cleft faces.

Biological factors . Pathogenic bacteria that live in the critical period of embryogenesis in a p -organisms mother may have a direct effect on the embryo, getting in his fabrics through the placenta and cause deformity by increasing the temperature, and of changing the supply of oxygen, disrupting endocrine function or vitamin balance (syphilis bacteria , listeriosis, brucellosis). Teratogenic effects Okaz and a mother's infection staphylococci, streptococci, pneumatic, gonococcus, the bacteria I mi paratyphoid, tuberculosis myco bacteria leprosy, from the simplest - toksopla of Mami.

Recognized cause malformations of certain bacteria and cial and protozoa microorganisms and their toxins: Plasmodium, pale treponema, to a kovye microorganisms, bacteria, tularemia, gonococcus, typhoid bacillus, dysentery bacillus, steam and typhoid bacteria, Rickettsia, toxoplasmosis.

Mental factors. Pathogenesis is due to trauma giperadrenalinemiey causing disorder placental circulation, and the latter being d and the short-term, can cause deformities.

The frequency of occurrence of developmental abnormalities is also affected by *medical and social factors* . Congenital malformations in children born to mothers with diabetes occur in 4-12 percent of cases. Recent studies have found

that careful monitoring of glucose levels before implantation of a fertilized egg and throughout pregnancy can reduce the incidence of congenital anomalies to 1.2%.

The abuse of cocaine and heroin leads to microcephaly and other abnormalities in the development of the fetal brain. Of great importance is also what teratogenic drugs the father took. Offspring of men who abuse cocaine are at increased risk of congenital anomalies. Cocaine enters the sperm and can enter the egg during fertilization, which causes a violation of the normal process of fetal development. Before any drug, including anesthetic, is classified as teratogenic, it is necessary to carefully evaluate the possible effect of all the above factors.

In addition, the use of alcohol and nicotine leads to a variety of congenital disorders, the severity of which depends on the amount of alcohol consumed - especially in the early stages of pregnancy. Fetal (i.e., affecting the fetus) alcohol syndrome is a severe congenital disease, sometimes incompatible with life.

ENDOGENIC RISK FACTORS:

These include: heredity, biological inferiority of germ cells, the age of the parents.

Consideration of the reasons for having a child with VRGN indicates that 5% - 25% - of cases they are determined by hereditary factors and mi. According to Nasritdinov Kh.K. cf. a unit of the examined contingent, patients in 10.2% were born in families where the father or mother were carriers of cleft lip and palate in 5% of families the carriers of this defect were brothers or sisters of this probond. Cabka (1974), examining 2474 patients with congenital clefts of the upper lip and palate, found that the ratio of the number of cases of endogenous and exogenous etiology is approximately 50:50

Often, however, a factor such as a hereditary predisposition plays a role in the development of congenital malformations: it is known that if parents or immediate relatives have congenital malformations, then the risk of giving birth to a child with similar defects increases, that is, we are talking about "family accumulation" developmental anomalies.

On the examples of clefts of the lips and palate of various etiologies, the general principles that are characteristic of any monogenic, multifactorial, and chromosomal hereditary diseases are traced. With an autosomal dominant type, the disease can occur both when a mutant gene is transmitted from a parent with cleft lip and palate, and when a sporadic mutation occurs in the reproductive cell of one of the parents. However, in both cases, the risk to the offspring of a child with a cleft will be 50%.

In the past, when cleft lips and palate caused the death of children in the first years of life, almost all newborns with autosomal dominant syndromes present in the population appeared as a result of new mutations. Currently, in connection with a significant improvement in surgical technique and the implementation of a whole system of rehabilitation measures, the number of operated patients with autosomal dominant syndromes that marry and transmit the mutant gene to their children is increasing. Autosomal dominant mutations are characterized by an increase in the average age of parents, especially fathers. The degree of increase in the age of

fathers is approximately the same for various autosomal dominant syndromes with cleft lip and palate and amounts to 32.7 + 7.4 years, which is 5 years higher than the average age of fathers in the control group. Blood kinship of parents, determined by the coefficient of inbreeding or by the "mating distance" (distance from the husband's birthplace to the wife's birthplace), does not matter with autosomal additional syndromes. Zubova A.F. (1980), Nasritdinov Kh.K. (1995) analyzing the age composition of parents with crevices noted a favorable childbearing age from 20 to 34 years. A more unfavorable age was the period from 35 to 50 years. Nasritdinov H.K. He believes that a number of structural changes in biochemical hormonal and other functional systems occurring during this period in the body are aggravated by the course of pregnancy, by the action of a number of factors, and become pronouncedly complex. In addition, it turned out that the birth order also increases the risk of giving birth to children with cleft, especially between U1 and X1U births.

In autosomal recessive syndromes with cleft lip and palate, a child with a defect is born from two healthy parents, heterozygous carriers of the abnormal gene. The risk for another child in this family is, as for the first, 25%, while the risk for children with a cleft is minimal. Naturally, the age of the parents and the number of proband pregnancy in such syndromes does not matter. At the same time, the "mating distance" is significantly reduced. In some cases, the parents of a sick child are blood relatives. Zubova A.F. in the history of 27 children out of 233 (11.5%), marital marriages were noted, with all marriages being concluded on the maternal side. Zubova believes that with an increase in the degree of kinship in marriages, the risk of having children with malformations of the face increases.

The frequency of new recessive mutations is negligible; almost always, the parents of a child with this syndrome are heterozygous .

The most rare monogenic forms of cleft lip and palate are sex-linked syndromes. More common X-linked mutations in which a woman is an unaffected carrier of a mutant gene. In this case, the corresponding defects are found in men in the pedigree. With X-linked dominant inheritance, the syndrome is detected in heterozygous women, and the defeat of hemizygous men is so pronounced that, as a rule, it is incompatible with extrauterine existence.

Zubova A.F. in the anamnesis of 54 (23%) children with crevices it was established polyetiological factors. In 33 cases , 2 factors were noted (maternal age, high birth order or high birth order + hypochromic anemia).

In the history of 16 children, 3 factors were noted: a high order of childbirth + the age of parents + a burdened heredity or a high order of childbirth + heredity + carriage of DDT or a high order of childbirth + age of parents + family marriage. According to 4 factors, a history of 5 children was noted - a high order of childbirth, the age of the parents, carriage of DDT and other congenital malformations of the father.

The conception period was specified in the history of 151 children. The analysis showed that fewer children with crevices were born if the period of conception was related to the autumn months of 20 (13%). The

unfavorable season of conception was winter (42 children 27.8%), spring 45 children (29.8%) and summer 44 children (29.1%).

The most unfavorable months for conception were January - 20 children (13%) , July 20 children (13%) and May 19 children (12%). According to Zubova A.F. spring and summer are unfavorable for conception due to the use of pesticides in agriculture. In winter, there is a seasonal increase in the number of infectious diseases, as well as a lack of vitamins in the diet.

Cleft lip and palate can occur as one of the components of multiple malformations in chromosomal abnormalities. Common signs of all syndromes of chromosomal etiology are prenatal hypoplasia, symmetry of lesions and oligophrenia. Such children with cleft lip and palate are clinically the most severe. Cleft lip and palate are nonspecific for any one chromosomal syndrome. They arise with anomalies of 50% chromosomes (1; 3; 4; 5; 7; 10; 11; 13; 14; 18; 21 and X), both in deletions and translocations. This does not mean that any child, for example with Down syndrome, has a cleft lip and palate, but the frequency of cleft occurrence with Down syndrome is 10 times higher than this frequency in the general population.

For multifactorically inherited clefts of the lip and palate, common signs for all multifactorial diseases are characteristic. For the occurrence of such forms, the presence of genetic susceptibility (predisposition) and the impact of any adverse environmental factors that contribute to the realization of susceptibility into a malformation are necessary. In themselves, adverse environmental conditions, regardless of a specific genetic background, are not able to cause the appearance of such syndromes. A characteristic feature of this inheritance is the difference in the "threshold of exposure" for men and women (the formation of a defect occurs only when the "concentration of genes" exceeds a certain value — the "threshold"). The total effect of genes that can cause a cleft (like any other defect) in representatives of the same sex, for example, in men, is insufficient to cause it in females.

In this regard, the frequency of affected girls and boys with cleft lip and palate is multifactorial in nature, whereas in monogenic forms (with the exception of X-linked forms, which are usually very small), this indicator is the same for men and women.

In some cases, the item of rock razv Itijah is caused by a mutation of n on and transmitted by recessive or dominant inheritance type. Y is greater than n - OPERATION Nasledov Contents of this defect is due to the theory of polygenic type Nasledov and Nia with a threshold effect. It is believed that rassche n Lenia lip and palate are formed as a result of the action set of hereditary Prizna and Cove and adverse influences of external environment.

The inability of cells participating in fertilization, the image of the Vat full zygote can be caused by heredity, "perezrev and Niemi" germ cells during prolonged delay in the genital tract and their corrupt and eat. In this regard, it is appropriate to note that in 75% of chronic alcoholics sperm cells have pathological changes .

I have not received a final decision on the question of the meaning of age shall bear th Leu in the etiology of cleft lip and palate in the offspring, despite the

many tourists quite a fief literature on this topic. Some researchers Resch th conductive role to the mother's age.

It was found that the older age of the mother contributes to the appearance of aberrant complexes, in particular the increase in the frequency of non-disjunction chrome on catfish and karyotype changes due to age.

Gynecological incidence.

According to Nasritdinov Kh.K. mothers who have children with cleft lip and palate have a high gynecological morbidity. The incidence of female genital organs in the examined population is 4.5 times higher than in mothers who gave birth to healthy children (inflammatory diseases of the genitals, cervical erosion, menstrual irregularities). Among the examined patients , spontaneous abortions (48.8%), premature birth (20.2%) , early uterine bleeding (20.6%), and various kinds of complications after childbirth occurred significantly more often than among the control population .

Heredity.

We conducted an analysis of 1070 children with HRH who applied to the clinic of surgical dentistry of the First Tashkent State Medical Institute. Parental marriages were noted in 22 (10.9%) cases, anemia during pregnancy in 32 (15%) toxicosis in 23 (10.7%), flu, stress and other diseases in the first three months of pregnancy - in 38 (17 ,9%). Work related to the harmful working conditions of one of the parents with pesticides, at chemical plants and laboratories, and alcohol consumption were noted in 20 (9.4%) cases. Inheritance of the defect was detected in 122 (11.5%). The frequency of inheritance depended on the form of the defect. So with isolated clefts of the palate, it amounted to 9% of isolated clefts of the lip 13%, and with through clefts of the upper lip and palate 19%.

Of the examined patients, 9.2% were born in families with related marriages.

Conclusions. Cause of VRGN may be exogenous and endogenous factors acting early in the inside so read as you development, namely the period of formation of the facial skeleton. More than half of congenital malformations occur due to external and multifactorial influences. In countries with a low social and economic level of development that determines the appropriate level of the sanitary and epidemiological health service, new teratogens appear that are not recognized and therefore not eliminated, and the poor quality of life and medical care, which determines the health of the population, adversely affects its reproductive function.

The vast majority of researchers have come to a consensus that the cleft lip and palate is a polygamous multifactor and cial pathological process having different etiologic risk factors, as well as large populations of differences Mr Noe and family rate.

Surgery for congenital cleft upper lip is indicated for children born on time, not having other severe malformations that could affect the vital functions of the body, as well as children not suffering from acquired diseases (pneumonia, etc.,

inflammatory processes of various origins) and not having injuries to the central nervous system.

Surgery for newborns is performed with all types of congenital cleft upper lip.

When deciding on the indications for surgical treatment, the surgeon must take into account the particular state of the child in the first days of life.

Most often, the weight of the child is an indicator of the functional maturity of the newborn. Born in term baby weighs an average of 3200 - 3300 g, sometimes - 2500 g . The difference in weight between boys and girls is 150 - 200 g

In children with incomplete cleft upper lip or with isolated cleft only lips, surgery should be performed after 6 months; If possible, children with combined clefts should be operated on in the hospital and not discharged during the entire preoperative period or transferred to the premature ward, where he can receive rational treatment and care.

Children with very large weights (4500-5000 g) must also be carefully examined before surgery to make sure that there are no injuries to the central nervous system that the baby might have received during childbirth.

In addition to weight, the surgeon is also interested in the behavior of the newborn and the functions of its various organs.

In a functionally mature newborn, the movements are usually active, the scream is loud, the skin is pink-red, breathing is rhythmic, somewhat quickened, the number of breaths per minute reaches 60. On the first day after birth, the respiratory movements are more superficial, by the 8th day the depth of breathing increases and becomes constant.

In children during the neonatal period, an irregular rhythm of heart tones and increased heart rate (up to 120-140 beats per minute) are noted.

In healthy newborns, when screaming, moving, during sucking, the pulse speeds up, and during sleep it slows down by 20-30 beats per minute. The place of the cardiac impulse coinciding! 1 with the left border of relative dullness, the right border of relative dullness passes along the right parasternal line, the upper border along the II rib. The left border of absolute dullness passes along the left nipple line, the right • along the left sternal line, and the upper along the III rib. The first tone at the base of the heart is more enhanced than the second.

In a newborn, the body temperature sometimes reaches 38 ° C, in 3-6 hours after birth it drops to 36 ° and by the end of the second or third day it is set within 36-37 °.

In some cases, on the third or fourth day in newborns, the temperature can rise to 39 °. This increase, not associated with either infection or inflammation, Reus called transient fever.

Transient fever usually coincides with the period of the greatest physiological weight loss, which is accompanied primarily by tissue loss of fluid. It is believed that transient fever occurs due to insufficient fluid intake with protein-rich foods (colostrum).

The blood composition in newborns is slightly different than in older children. The number of red blood cells in them on the first day of life ranges from 6 to 6.5 million, from the 3rd day it decreases slightly and reaches about 5.5

million by the 8-10th day. Hemoglobin on the first day is 140%, by the 9th day its content is reduced to 110-100%. The number of leukocytes in 1 mm3 of blood on the first day of a child's life averages 29,000, and from 7-12 days it decreases to 10,000-12,000 (the norm for healthy children).

According to B.F. Shagan (1950), the first lymphocyte crossover occurs on the 4th day. In the first days of life, a shift of neutrophils towards young and rod-shaped forms is noted. The number of monocytes during the first 10 days is kept at almost the same level, the number of eosinophils is gradually increasing. ROE in the neonatal period is low (1.5-4.5 mm / hour).

Physiological jaundice is observed in 85% of newborns. She usually appears on the 2nd-4th day. The degree of coloration of the skin, mucous membranes and sclera can be different - from mild yellowness to a pronounced color of tissues. Physiological jaundice usually ends by the 6-7th day, in severe cases, it can drag on for up to 2-3 weeks. Despite the fact that this is a physiological phenomenon, during this period the child's recovery in physiological weight loss somewhat slows down.

Knowing these features of the condition of the newborn allows the surgeon, pediatrician and obstetrician-gynecologist to decide on the indications for surgery of a child with congenital cleft upper lip in the very first days after birth.

Despite the fact that there are very few contraindications to surgery at this age, the surgeon, however, must know them. All of them can be divided into two groups:

1) combined congenital malformations that impede the implementation of surgical intervention for cleft lip in the first day after the birth of a child;

2) acquired diseases that make it impossible to conduct surgery at the moment.

B. Ya. Bulatovskaya out of 95 children with congenital clefts of the upper lip observed in 14 (14.7%), in addition, other malformations: clubfoot, congenital heart defects, microcephaly, syndactyly, umbilical hernia, hydrocephalus, underdevelopment of the genital organs, etc.

In most cases, with congenital combined malformations, early intervention on the upper lip is contraindicated due to the difficult general condition of the newborn.

In the last decade, more and more authors are inclined to conduct operations at a later date. There are a number of reasons for this.

1. The inability to properly care for both the child and the wound in maternity hospitals.

2. After surgery, children with wide clefts are at high risk for wound divergence.

3. The results of the operation do not always meet aesthetic standards.

Yu.L. Obraztsova (1971) conducted an analysis of the anatomical and cosmetic and functional features of the operation according to the Obukhova-Frolova method, performed up to 6 months and after 1 year did not establish significant differences. Years of experience in the clinic of pediatric surgical dentistry show that the most optimal age for performing cheiloplasty of unilateral

cleft upper lip is 6-8 months. With bilateral through cleft lip and palate, it is advisable to carry out cheiloplasty in two stages: in 4-6 months, operate the wide side, 6-8 months in the second side. With normal feeding of a child with isolated cleft lip, cheiloplasty was performed at 10-12 months.

Treatment of children with congenital unilateral through cleft upper lip.

In our opinion, in primary cheiloplasty, the surgeon should strive to achieve the following goals:

1. Restore the integrity of the circular muscles of the mouth.
2. Create a symmetrical cupid bow.
3. Create the same height of the skin of the lip and the red border.
4. Restore the column on the flattened side of the filter.
5. Set the base of the flattened wing of the nose to a normal level.
6. Reach the same perimeter of the nostrils.
7. Create a sufficient depth of the vestibule of the oral cavity.

Based on the literature data, taking into account the data accumulated in our clinic, we came to the conclusion that the most optimal and satisfying requirements of primary cheiloplasty are two large groups: patch methods - Z - plastic with a flip triangular skin flap at the bottom of the filter and the linear method rotation and movement.

Patchwork involves closing the cleft by moving triangular and rectangular flaps, the size of which depends on the width of the cleft and the degree of shortening of the medial fragment of the upper lip (S.D. Ternovsky, 1952; A.A. Limberg, 1968; R.D. Novoselov, 1978; JD Sidman, 1994).

The most successful among patchwork methods is the operation developed by L.M. Obukhov (1955, 1957) and C.W. Tennison (1952).

Developed by the authors independently of each other, but inherently no different. Its essence is the lengthening of the underdeveloped inner column of the filtrum, moving a triangular skin flap from the outer fragment. The calculation method of L.M. Obukhovaya laid the difference in the values of filtrum on the affected and healthy side.

He further developed the patchwork technique in works using flip flaps in the lower third of the lip and at the base of the nasal septum, where the second flap, according to the authors, improves the position of the nose wing.

Terms of surgical treatment of children with bilateral lip clefts

Many researchers have found that early cheiloplasty promotes rapid convergence of the lateral fragments of the upper jaw with the incisor bone, followed by narrowing of the frontal section of the upper jaw in the transversal plane in the canine area and the development of false progeny and malocclusion.

Another group of authors believes that cheiloplasty should be performed during the period from the newborn to six months of age of the baby, depending on

the result of prior orthodontic treatment. According to these authors, a normally functioning upper lip not only beneficially affects fragments of the upper jaw, but also stimulates the growth of the facial skeleton.

DR Millard notes that cheiloplasty performed in the early stages by a rational method has a formative effect on the upper jaw due to the normal function of the tongue, muscles of the lips and cheeks.

Today, most modern surgeons consider the optimal period of primary cheiloplasty in patients with bilateral clefts of the upper lip and palate to be from four to six months after the birth of a child, i.e. before the ossification of the suture between the openers and premaxilla.

E.U. Makhkamov (1981-1997) proposed surgical intervention in several stages with bilateral through symmetrical crevices of the upper lip and palate with an interval of at least one and a half to two months. With a symmetrical through cleft lip, the wide side is chosen for the first stage of cheiloplasty.

A.T. Usmanov, summarizing the long-term work of E.U. Makhkamov, proposed the terms of surgical treatment. So, with bilateral through clefts of the upper lip and palate of the 2nd and 3rd degrees, the author recommends operating in several stages:

first: cheiloplasty of the wide side of the cleft by four to five months;

the second: cheiloplasty on the other hand by six to eight months;

third: cyclic plastic surgery up to two years;

fourth: plastic hard palate to three to four years.

When choosing the method and stages of primary cheiloplasty, such important points as the state of the central fragment of the upper lip - prolabium, the shape and degree of protrusion of the maxillary bone, the distance between the lateral fragments of the upper lip and maxillary bone should be taken into account.

The method of surgical treatment of children with congenital bilateral cleft upper lip.

One of the difficult problems in plastic surgery of the maxillofacial region is the determination of indications for the choice of a method of primary cheiloplasty while eliminating bilateral clefts of the upper lip and palate.

The growth and development of the middle zone of the face, the formation of the appearance of the child and the effectiveness of the final chelorinoplasty in adults and adolescents largely depend on the correct choice of the method of primary surgery on the upper lip.

The anatomical and cosmetic defects inherent in the deformations of the maxillofacial region after the irrational choice of the method of surgery on the lip not only cause the violation of such vital functions as breathing, chewing, speech, facial expressions, but also negatively affect the appearance, which leads to depression of patients and significant changes in their psycho-emotional state.

The result of primary cheiloplasty with bilateral clefts of the upper lip largely depends on the correct use of the tissues of the central fragment of the upper lip (prolabium), namely its skin part and the red border. However, cheiloplasty for this pathology is associated with a number of problems, both local and general.

Local problems include protrusion of the intermaxillary bone, an underdeveloped prolabium, a shortened columella, a thickened nose, and a lack of normal anatomical landmarks.

Currently, over 40 methods of primary cheiloplasty of congenital bilateral lip clefts are known.

Most methods for eliminating bilateral lip clefts are based on the methods described for unilateral clefts. Only certain methods have been developed specifically for bilateral clefts, taking into account severe hypoplasia of the central part of the lip, columnel and deformation of the upper jaw that exists before surgery.

A group of domestic and foreign surgeons is one of the supporters of linear methods for eliminating bilateral lip clefts in one or two stages. Methods by Limberg A.A., Ternovsky S.D., Rauer A.E., Cronin TD They believe that vertical scars on both sides of the prolabium are most convenient for completing adult cheilorinoplastics.

When bilateral lip clefts were established, the cheiloplasty methods of L.M. Obukhova and CWTennison were used, which provide for the movement of lower lateral triangular flaps in the lower third of the prolabium in two stages.

M.S. Tsyplakova with a bilateral symmetrical through cleft with an underdeveloped prolabium uses the Hagedorn-Barsky-Limberg method with Z-plastic of the crest-shaped folds of the nose wings according to Znamensky as the choice for the method of primary lip surgery.

In order to restore a sufficient height of the central fragment of the lip during the underdevelopment of prolabium, many surgeons use modifications of C. Hagedorn operation. Its principle is to build up the prolabium with the help of two quadrangular flaps cut in the lower lateral parts of the lip, and stitching them together with each other under the freshened lower edge of the prolabium.

One of the few methods that was originally described for the correction of bilateral crevices in two stages, and then began to be used for cheiloplasty of single-sided crevices, is the Wynn side flap method.

After any gentle method of primary bilateral cheiloplasty, the terminal section of the nose grows in adverse conditions, since it is pulled to the upper lip due to congenital maldevelopment of columella. Therefore, surgeons until recent years have been developing methods of primary bilateral chelorinoplasty, trying to create the best conditions for the growth of all elements of the upper lip, nose and columella.

Davydov B.N., Psheniskov K.P. offer their own method of rhinocheyloplasty with cutting out a bifurcated skin flap to extend the columella with open access for rhinoplasty. To ensure a predictable result, the authors used cartilaginous “rafters” between the medial legs of the lower lateral cartilage and under their lateral legs with an emphasis on the edge of the pear-shaped opening. Functional and aesthetic results were obtained in 87.5% of cases.

Today, many modern surgeons pay special attention to the latest anatomically substantiated combined surgical and orthopedic methods described

in 1990 . DRMillard and RALatham, in the removal of bilateral through clefts with wide and small prolabium.

The method of two-stage cheiloplasty according to Millard.

Using an arcuate incision on the medial fragment of the upper lip, we cut out and reduce to a normal level one half of the hypoplastic prolabium. At the same time, we deepen the vestibule of the mouth on the corresponding half of the lip by cutting out a tilting rectangular flap on the red border. This moment is an important stage of the operation, as it makes it possible to create a sufficient depth of the vestibular space of the vestibule of the mouth. At the base of the nasal septum, we cut out a small skin flap intended for nose plastic surgery. On the lateral fragment of the lip, we cut out the upper lateral musculocutaneous flap and the mucous-muscular rectangular flap on the red border. We sew a corner-shaped flap into the defect under the base of the columella, and using the rectangular flap we restore the red border of the reduced half of the prolabium.

Types of secondary deformities after cheiloplasty, the timing of reconstructive surgery.

Reconstructive operations after improperly performed bilateral cheiloplasty are many times more difficult than the primary operations for bilateral clefts. Complex, multi-stage, traumatic and painful operations for patients are required, which in most cases give limited cosmetic and functional results. In addition, such an intervention often ends in failure due to adverse local conditions, errors in the planning and technique of the operation.

Zhaparova D.A. in his work indicates that deformities of the upper lip that arise after cheiloplasty due to through cleft, in addition to anatomical and cosmetic defects, are characterized mainly by the development of functional disorders in 96% of cases. More often they appear as local dysfunctions of the upper lip (67%), less often total (29%). Moreover, the last group, as a rule, are patients after bilateral cheiloplasty. Most cheiloplasty techniques do not provide for the formation of a deep vestibular space in patients with bilateral congenital clefts of the upper lip. Therefore, in many patients, the central fragment of the upper lip is fused to one degree or another with the incisal bone, the vestibule of the mouth is insufficient or completely absent. This, in turn, complicates orthodontic and prosthetic treatment, exacerbates the retrusion of the middle zone of the face. The author offers his classification of deformities of the upper lip after cheiloplasty due to congenital cleft, and also on the basis of the proposed classification offers a method for correcting deformation of the upper lip, including a new way to eliminate deformation of the vestibule of the mouth, which has a positive effect in 24% of the operated children.

Interesting is the statement of a number of authors that the underdevelopment of the upper jaw and improper occlusion are mainly the result of intervention on the upper lip and palate. So, a number of them were observed by approximately 150 adult patients with unoperated congenital clefts of the upper lip and palate, and they noted sufficient development of the upper jaw, satisfactory occlusion of the

teeth and the absence of narrowing of the upper jaw. I.A. Kozin, in three of his patients who underwent only economical linear cheiloplasty in childhood and did not undergo uranoplasty until adulthood, observed normal growth of the facial bones and the correct ratio of teeth. However, in 224 patients after through clefts, he observed the following deformations of the upper jaw:

1) narrowing of the upper jaw due to the medial displacement of the lateral alveolar processes behind the intermaxillary bone;

2) in the majority of patients with narrowing and atrophy of the upper jaw, the author noted a certain degree of underdevelopment or flattening of the middle third of the face;

3) in many patients the intermaxillary bone was mobile, the contours of the dental arch were broken, there were various malocclusions.

In patients operated on by the method of Limberg in the long term after surgery, the middle part of the lip remains shortened, is pulled up, partially compensating for the underdeveloped skin part of the nasal septum. Prolabium in these patients has a square, horseshoe or rectangular shape.

In many patients, instead of the median tubercle of the lip, despite the movement of tissues from the lateral sections during primary cheiloplasty, the so-called whistle symptom remains. Such a recess in the central part of the upper lip leads to a violation of the tightness of the mouth.

According to many scientists, the correct movement of the degenerated fibers of the circular muscle of the mouth is of great importance in eliminating the congenital cleft of the upper lip. Normally, the fibers of the circular muscle of the mouth are horizontally crossed in the midline, forming a single ring, ensuring normal lip function. With complete bilateral clefts, the fibers of the circular muscle of the mouth of the side fragments of the lips extend parallel to the edges of the cleft to the bases of the wings of the nose, and there is no muscle tissue in the central fragment.

Surgical treatment of congenital cleft palate

In the treatment of congenital cleft palate, radical uranoplasty proposed by A. A. Limberg was previously widely used. This operation is indicated in children aged 12-14 years (M. M. Vankevich, 1951; A. T. Titova, 1964, etc.). The invasiveness of the operation and a significant number of complications do not allow the use of the indicated technique in young children.

A.S. Silaeva (1965), I.P. Bakulis (1966), E.N. Samar (1970) proposed to produce uranoplasty at an earlier age, while they use the method of radical uranoplasty according to A.A. Limberg in various modifications .

However, as our experience has shown, the described surgical procedures needed to be improved. The traumatic performance of radical uranoplasty, as a rule, negatively affects the growth and development of the jaw, which in turn leads to severe deformation of the dentition. The relevance and significance of these issues make us look for new ways to solve this problem. In 1971, L.E. Frolova proposed a method for surgical treatment of congenital cleft palate, taking into account the form of cleft and anatomical changes in the oronazofaringionnoy area.

The operation is performed under endotracheal anesthesia according to the half-open Air system. In this case, the endotracheal tube is selected taking into account the age of the child and is inserted into the trachea through the nose. To prevent aspiration into the respiratory tract of mucus and blood after intubation, the pharynx in the area of its lower parts is densely swabbed with gauze turunda slightly moistened with a solution of furatsilin (1: 5000). The tamponade is completed by fixing the endotracheal tube to the middle and to the back of the throat. In this position, it does not interfere with the surgeon to immobilize the soft tissues of the lateral pharyngeal walls to the middle.

With the child's head thrown back as far as possible, a rotary expander is installed. Rubber mouth guards are put on the movable stops of the arc of the latter, which protects the mucous membrane of the alveolar process of the upper jaw from injury. In the presence of IV | IV, the mouth guards are mounted directly on these teeth. Then the tongue is pressed by the mirror to the bottom of the oral cavity, it is opened by 2.5-3.5 mm, and the handle of the rotary expander is fixed motionless. After the initial treatment of the surgical field and the establishment of the conservator, the oral cavity and pharynx are treated with a gauze ball soaked in a solution of furatsilina (1: 5000) or other antiseptic solutions. The toilet of the oral cavity ends with aspiration of mucus, flushing fluid and often blood clots formed during intubation due to significant injuries of the mucous membrane of the nasal cavity or posterior pharyngeal wall.

For a better view of the soft tissues of the lateral pharynx walls, posterior palatine arches and soft palate (from the nasopharynx), the split tongue at the warp is taken on each side for ligature and pulled outward.

The progress of the operation . An incision is made from the top of the cleft to the border of the hard and soft palate, then along the nasal surface of the soft palate obliquely down the side wall of the pharynx at the level of the upper pole of the posterior palatine arch. After this, the incision is directed along the side wall of the pharynx behind the posterior arch. Depending on the size of the pharyngeal ring, the incision on the lateral pharyngeal wall is completed at the level of the middle of the posterior arch or continues to the level of the lower pole of the posterior palatine arch Tsal. Figure a). Tissues are dissected so that the flaps for the nasopharyngeal region and the oral region consist of mucus-muscular layers. Sutures form the mucus-muscular pulp all over ”(see figure, b). Lastly, the tongue is made plastic: from the incision line in the soft palate from the side of the nasal cavity, an incision is made along the inner surface of the tongue along the midline to the apex. The tissues are separated by 2-3 mm (see figure, c). Full-layer suturing: inverted catgut sutures are placed in the pharyngeal and nasal cavities, nylon sutures are placed on the mucous membrane of the tongue and in the oral cavity. If the operation ends there, the operation is called cycle repair.

With a defect of the hard palate, in addition to surgical intervention on the soft palate and tissues of the pharynx, the next stage of the operation involves plastic surgery of the hard palate. For this purpose, mucoperiosteal flaps are removed from the palatine plates and stitched in layers along the entire length; separately suture the mucous membrane of the nasal cavity.

Carrying out all stages of the operation allows you to narrow the pharyngeal ring without much effort and close the cleft of the soft and hard palate throughout.

Uranoplasty of the sky with narrowing of the pharyngeal ring according to the method of L.E. Frolova differs in its low-invasiveness from radical uranoplasty according to A.A. Limberg. These differences are in the following points:

• side sections according to Langenbek and peeling of the mucoperiosteal flap are performed only from the surface of the hard palate of one fragment (with unilateral crevices on the diseased fragment),

• the following main stages of surgical intervention are missing,

• dissection of the mucous membrane of the nasal cavity along the posterior edge of the hard palate,

• resection of the posterior-inner edge of the large palatine openings,

• incisions to narrow the middle part of the pharynx,

• tamponade of near-pharyngeal niches and interlaminar osteotomy.

Plastic surgery of the anterior hard palate using a triangular-shaped mucoperiosteal flap (V.I. Zausaev) of large sizes (B.D. Kabakov) and a palatine-flap flap (V.D. Shchegoleva) does not exclude injury to surrounding tissues and is used mainly as one of the stages of uranoplasty.

L.E. Frolova and .E.U. Makhkamov (1978) to eliminate cleft hard palate developed a method of plasty with a single-layer flap flap of the oral mucosa, which is cut from a large fragment of the upper jaw. Surgery can be performed with uranoplasty, as well as with the closure of a hard palate defect after previously performed soft palate surgery with a narrowing of the pharyngeal ring.

Operation technique . Under endotracheal anesthesia, incisions are made along the lateral walls of the pharynx behind the posterior palatine arch and then obliquely along the nasal surface of the soft palate to the border of the hard and soft palate, then the incision is continued along the edge of the cleft to the apex of the small fragment, and the incision is made along the mucous membrane on the large fragment of the hard sky also to the top of the cleft, stepping back from its edge by a distance equal to the width of the defect of the hard sky (see figure).

This flap of the mucous membranes with the base at the edge of the defect is carefully separated from the adjacent periosteal layer and tipped over 180 °. A flap with a pre-epithelialized edge is placed between the palatine bone plate and the mucous membrane of the opposite side and fixed with mattress sutures (see figure).

Plastic surgery of the soft palate and tongue with narrowing of the pharyngeal ring is carried out according to the method of L. E. Frolova.

The wound surface of the hard palate is covered with gauze soaked in iodoform and fixed with a protective plate.

The average duration of the operation is 40-50 minutes, and plastic surgery of the defect of the hard palate after the previously performed cycloplasty takes 20 minutes.

It is known that after radical uranoplasty performed at an early age, pronounced deformations of the dentofacial system are noted to varying degrees.

To monitor the state of the dentofacial system after the operation, control models were made every 6 months from the upper and lower jaw and

anthropometric measurements were performed using the apparatus proposed by D.N. Popova and A.A. Talalaev.

When analyzing these data, a uniform growth of the upper jaw is observed, similar to that in healthy children without a cleft palate.

In conclusion, it should be noted that this method of plasty of the hard palate with a through cleft lip and palate is not traumatic, technically simple, allows you to completely eliminate the tissue defect; in the postoperative period, gross violations in the development of tissues of the upper jaw are not observed.

Lecture number 2

Subject : TUMORS OF THE DENTAL SYSTEM IN CHILDREN. ONCOGENESIS, CLINIC, TREATMENT PRINCIPLES.

1.1. T echnology cal model of the formation

Lesson time: 2 hours	Number of students
Type of activity	Introduction of lecture news
Lecture plan	Familiarization with the topic
The objective of the training session	To study methods for treating congenital facial clefts.
Teaching methods	Conversation, visual aids for lectures
Type of activity	general - collective
Related Visual Aids	Textbook , lecture material , projector, computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

1.2. Technological map of lectures

Work stages	Teacher	Student
Preparation stages (10 minutes)	1. The purpose of the lesson 2. Preparation of slides for lecture material 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3.Kharkov L.V. Surgical dentistry and maxillofacial surgery in children. Year of publication: 2005. 4. Vinogradova T.F. - Dentistry for children. M., 1987 425 bet. 5. By Henry Bed and . Clark - Practical Oral Surgery . Philadelphia ., 1980 y .	Listens and records
1. Introduction (15 minutes)	The purpose and objectives of the lecture material :	Are listening Answers

	preliminary diagnosis and early preparation of the patient	student questions
2 main stage (55 minutes)	Introducing a slide show topic	Listen and record Listen
The final stage of 10 minutes	Conclusion .	Listens and records

Lecture text

Statistics of neoplasms of the maxillofacial region in children and their comparative frequency with adults. Centralized registration of tumors in children is not organized. In the publication, the statistics of these tumors are insufficient. The most commonly observed epithelial malignancies in children in adults are extremely rare. Tumors (retinoblastoma, Burkitt's lymphosarcoma, etc.), which are found only in children, sometimes develop in the head and neck. In the group of patients with maxillofacial neoplasms, children account for 12.4%, with 95% of them having benign tumors and 5% of them being malignant.

Tumors and tumor-like formations of the face according to E.Yu. Simonovskaya, L.N. Makedonskaya, G.G. Krasnogorskaya are found in 12.4-21.7% of cancer patients, and according to A.A. Kolesov (1970) - 25%. Tumors of soft tissues - 60%, facial bones - 40%. Tumors in children primarily affect organs of the connective tissue structure, while epithelial neoplasms are more rarely observed. Tumors in children are mostly dysontogenetic and arise from a malformation or improperly filled individual cell elements in the embryonic period. Explanations of the causes of the formation of congenital tumors are found in the theory of Congane, which is currently somewhat modified.

In the early stages of embryonic development, sometimes, under the influence of various factors, the development of individual groups of cells is stopped or their formation occurs in excess . This process often occurs during the period when the cell of the germinal leaf is still in an undifferentiated form. A section of cells that have stopped in their development or are excessively formed do not accept the embryo’s tissues in the further differentiation and during its development can move (dystone) as part of tissues alien to them or remain in cognate ones. By the time of birth, these cells, due to the preservation of their embryonic properties, have great potential for rapid and energetic growth. They can be in a latent state for a long time in remy (sometimes all their lives), and also begin to grow rapidly from the moment of birth or after a few years. This can be explained by the preservation of the ability to auto-reproduce RNA in embryonic cells. For Congane cell primordia, which turned off in the early stages of embryogenesis, a slight nonspecific effect is sufficient to activate auto-reproduction of RNA and lead to tumor growth.

According to ATGEEV (1960) and others, tumors of an innate nature can be partly explained by the concertogenic effect of maternal harmonics in the prenatal period, given the particular sensitivity of the fetal tissues to them.

A peculiar mechanism of the occurrence of congenital malignant tumors has been described by a number of authors: the transmission of malignant melanoma and other blasts from a sick mother through healthy or affected planets.

TUMOR CLASSIFICATION: There is no classification of maxillofacial tumors in children. It is recommended that A. Kolesov use the following classification of tumors created by domestic dentists based on numerous observations of adults and children.

1. Tumors of the soft tissues of the maxillofacial region and neck

(connective tissue and epithelial nature.)

2. Tumors of the salivary glands (according to the classification of V.V. Panikorsky)

3. Tumors and tumor-like formations of the jaw bones:

a) osteogenic group (according to the classification of A.A. Kolesov)

b) neosteogenous group

c) odontogenic group (according to the classification of I.I. Ermolaev)

g) jaw cancer

e) metastatic tumors.

FEATURES OF THE COURSE AND RECOGNITION OF SOFT TUMORS FABRIC AT CHILDREN.

Pediatric oncostomatology is significantly different from oncology of the maxillofacial region of adults. Unlike adults, intracellular metabolism and its disorders, the state of the nervous and endocrine systems in children are characterized by pronounced differences and features in each age group.

Certain types of tumors in children are clinically manifested in those age periods that are associated with increased endocrine activity (intensive growth of the body, puberty, etc.)

So, hemangiomas, lymphangiomas , dermoids, Abrikov’s tumor (myoblastomyoma), etc., appear in the first 5 years of life. Reticular sarcomas in 2-13 years old. In children from 10 to 16 years (puberty, bone tumors are found), osteogenic sarcoma, Ewing's tumor, benign tumor of the jaw bones are observed.

With some types of tumors and dysplastic processes, gender differences in the composition of patients are observed. In boys, osteoblastoclastomas, lymphangiomas, fibromas, Ewing's tumor, reticular sarcomas are more often detected: in girls, hemangiomas and oral papillomas more often occur. Especially sharp prevalence of female patients with Albright syndrome.

One of the most important features of tumors in children is the existence of a family predisposition to certain neoplasms, in particular, gum fibromatosis, cherubism, and osteoma of the jaw bone. The growth rate of tumors in children and adults is not the same, even benign tumors in children grow much faster than in adults.

Soft Tumors: Vascular tumors are benign tumors originating from blood vessels, usually of a congenital nature. They make up about half of all childhood cancer patients. 50% of cases and more vascular tumors are detected with birth and in the first months of a child’s life.

Often hemangiomas at birth go unnoticed, because can be in the form of point vascular formations of not bright color and only with the growth of the child increase in size and attract attention. Girls have hemangiomas 2-3 times more often than boys. The face and head of the child are affected much more often than other parts of the body. According to the authors, hemangiomas of the face and scalp of children account for up to 87.2% of cases. The cheeks, forehead, lips, and eyelids are most often affected on the face. There are capillary, cavernous, branched and combined hemangiomas. Capillary hemangiomas are formations of a round, oval or irregular shape, often bluish-purple in color, sometimes tuberous, soft consistency, painless on palpation. When squeezing the hemangioma with fingers, it decreases in size, becomes denser, paler. After the cessation of pressure, the hemangioma is again filled with blood, takes its former form, shape and size. With the head and trunk tilted forward, the hemangioma increases in size.

Cavernous hemangiomas consist of many filled thin-walled cavities, affecting not only the skin, but also deep-lying soft tissues. Sometimes a hemangioma does not grow into the skin, the bulk of the tumor is located in the subcutaneous fat and muscle, and the skin above it remains unchanged or acquires a slightly inky shade. Cavernous hemangiomas are divided into diffuse and encapsulated. The latter are less common and grow more slowly.

Branched hemangiomas on the face and neck are rare: they come , as a rule, from the main vascular trunks. Their growth is extremely slow, which distinguishes these hemangiomas from simple and cavernous.

Cavernous hemangiomas are found in various parts of the oral cavity, can appear , be a source of bleeding and infection.

There are many methods for treating hemangiomas, but the indications for using one or another of them depend on the following factors: the type of tumor, its size and localization, the age and condition of the child, the growth rate, complication, and functional disorders caused by the tumor.

Sclerosing therapy, surgical and combined methods are most widely used .

Lymphangioma: A congenital benign tumor originating from the vessels of the lymphatic system. For a long time, the question of the affiliation of lymphangiomas with tumors or malformations remained controversial. Currently, they are considered to be neoplasms arising from malformations.

Lymphangiomas are less common than hemangiomas, but they are quite common and make up 20% of all angiomatous tumors. Lymphangiomas most often affect the skin of the face, lips or mucous membrane of the mouth and tongue. In the oral cavity, most often on the upper lip, its diffuse increase in size is caused.

In 85% of cases, lymphangiomas are detected at birth. This is especially true for lymphangiomas, which are of significant size.

Sometimes a tumor is clinically shown only a few months after birth. This is due to the fact that the greatest number of lymphangiomas at birth can be in a collapsed state and, i.e. not contained in the cavity of the lymphatic fluid.

According to the classification of RASK and AGT EB, lymphangiomas are divided into simple , cavernous, cystic and systemic.

Clinically, lymphangiomas are multiple finely tuberous nodules scattered on the surface and in the subcutaneous layers over a greater or lesser extent, sometimes merged together into a continuous soft, flat cake. In contrast to hemangiomas, lymphangiomas grow slowly. Intensive growth is noted only in those cases when there is a combination of the blood of the axial and lymphatic systems. (hemilis fangiomas). Treatment like hemangiomas.

NEUROGENIC TUMORS: Neuronal, neurosis, tumors originating from the peripheral nerves and their membranes, neuroblastomas, are extremely rare and come from the nerve ganglia.

Significantly more often in children there are tumor-like processes of neurofibromatosis in the form of single or systemic lesions.

Neurofibromatosis is divided into peripheral - skin integuments and peripheral nerves: the central - cranial nerves and spinal roots. In the latter form, damage to the auditory nerve is most often noted.

Morphological neurofibromatosis occurs in two main variants: in the form of inconsulated formations and in the form of diffuse growths of small nerve trunks. And those and others in the tumor, there are hundreds.

The main signs of the disease are the presence on the face of tumor growths of the skin and subcutaneous tissue or nerve trunks and endings. These growths can be in the form of a single node of soft-elastic consistency, or many small nodules. More often, extensive, diffuse pathological growths are observed that cover most of the face, the skin above the tumor is flabby, sack-like, hanging down, with reduced turgor, which decreases with increasing neoplasm and age.

When feeling a thin formation, a tight consistency with many strands and knots is noted. This pathological growth over time disfiguring facial features leads to visual impairment due to closure of the cheek, nasal breathing, chewing , hearing, etc. The overgrowth pressure on the bones in childhood leads to deformation of the facial skeleton and atrophy of the mandibular bone.

A lesion in the oral cavity is usually noted with a manifestation of the disease on the face and body, and is also accompanied by anomalies of the dentition (changes in the position of the teeth, malocclusion).

Neurofibromatosis, as a rule , is accompanied by focal imperpigmentation of the skin and, giant retinings or rudimentary teeth, and sometimes congenital malformations. Neurofibromatosis can remain stable for a long time or increase simultaneously with the growth of the child.

Sometimes, for no reason or after an injury, intensive tumor growth begins over the course of time, and fibrosarcomas occur in 51.5% of cases from neurofibromas .

Surgical treatment of neurofibromatosis, where possible, the tumor is completely removed . In diffuse disorders, the goal of therapy is to restore the function of a particular organ and eliminate the disfigurement of the face.

Fibroma of the organs of the oral cavity are most often found between the ages of 6 and 15 years, has a spherical shape, is delimited from neighboring tissues, usually covered with an unchanged mucous membrane. Unlike papilloma,

the epithelium of the mucous membrane above the tumor is never keratinized and its surface is smooth and pink. Fibroma is painless, mobile.

There are dense and soft fibroma. Histologically appears to be mature fibrous connective tissue. Surgical treatment of oral fibroids.

Symmetric fibromas are found on the palatine side of the upper jaw in the molar region, located symmetrically with respect to the midline of the hard palate. They have a hemispherical shape and a smooth surface. Covered with unchanged mucous membrane do not cause pain, grow slowly. Cases of the transformation of such fibromas into fibrosarcoma are described. Surgical treatment. Gum fibromatosis is more common in children aged 11-15 years. This is a kind of tuberous, dense proliferation of fibrous tissue, sometimes capturing significant areas of the gum covering the alveolar process from the outside and inside.

With gum fibromatosis, deformation of the jaw bones, slurred speech, and difficult chewing are often noted. Radiologically determined an adentia of milk and permanent teeth, and in advanced cases, rarefaction of the bone tissue of the alveolar process and tooth mobility. Differentiate should be primarily from hypertrophic gingivitis. The predisposing moment is the following factors:

Pigmented nevus - benign melanomas. The structure of the nevus may include all the components of the skin, but its morphological appearance is due to melanocytes. Often in the nevus there are also other elements, for example, hair formations, keratinized epithelial fibers, blood vessels or other mesenchymal tissues, which proves its dysontogenetic nature.

Allen and Spitz distinguish between epidermal-dermal nevus, intradermal, mixed, juvenile melanoma and blue nevus.

Epidermal nevus is observed mainly in childhood.

Intradermal nevus. More often - this formation has the appearance of a plaque, but often has a papillomatous or verrucous character. It can be combined with local gilding.

Mixed nevus - a combination of intraepidermal - with epidermal-dermal.

Juvenile melanoma is a mixed nevus, the morphological features of which are largely reminiscent of malignant melanoma, and biology is completely benign.

Blue nevus, occurs at any age, more often in children. It can be located anywhere.

FAVORABLE FACIAL BONE TUMORS.

Chondroma consists of cartilage. It is observed mainly in schoolchildren. Chondromas occur in the jaw bones, usually in the form of a tapeworm site. They are divided into central and peripheral.

An endochondroma of the lower jaw that binds to the remains of the Meckel cartilage (B.I. Migunov, 1963). More often than not, chondroma is found on the upper jaw and, as a rule, in its anterior section along the middle suture. Palpation of the tumor is dense, tuberous, motionlessly fused with the underlying bone, painless. There is deformation of the nose and open lips. X-ray against the background of the front surface of the upper jaw is determined by the additional formation of a rounded shape. Within this formation, calcification plots of various

sizes of intense location are visible. Echondroma tend to recur and turn into a malignant tumor more often than enchondroma.

Enchondroma, unlike echondroma, develops inside the jaw. The first clinical symptoms are soreness, mobility or displacement of the teeth located in the area of the tumor. Sometimes spontaneous pain appears in the completed intact tooth, deformation of the jaw. The swelling is dense, motionless, soldered to the bone, painful on palpation with pronounced parchment crunch. Differentiate with fibrotic dysplasia and odontogenic cysts. Treatment - resection of the jaw, but more gentle than with malignant tumors.

Fibroma of the jaw bone is a primary tumor of non-odontogenic origin. It is detected slowly, painlessly, sometimes the jaw is deformed. On the roentgenogram, the focus of resolution is rounded or ellipsoidal with fairly clear boundaries. The lesion is covered with a thinned bone layer without reaction from the periosteum. Foci of centralization are possible. Differential diagnosis should be carried out primarily with sarcoma, if it is a child or with osteoblastoclastoma and fibrous dysplasia. Treatment of surgical curettage.

OSTEOBLASTOKLASTOMA. It occurs in 10% of cases in relation to all tumors of the jawbones in children.

Distinguish lytic, cellular and cystic form. In childhood, a predominantly lytic form of osteoblast-clastoma is observed. The development of this form is fast. In some cases, the first sign may be pain with a tumor that is not yet palpable. When the tumor is pronounced, you can (see the expanded venous network of the oral mucosa, the teeth often move and become mobile. On the upper jaw, the tumor can grow into the maxillary sinus, nasal cavity and other bones of the facial skeleton.

Clinically, a picture of a giant cell tumor appears. Radiographically, a lesion focus is unstructured, an edge defect.

With cellular forms, small or large cavities distant from each other by bone partitions are radiologically observed. Differentiate from adamantinoma.

Cystic forms. On the x-ray represented by an oval focus, enlightenment of the jaw bone. The bone defect in the radiograph is homogeneous and resembles a periodontal cyst. Borders from all sides.

Mixoma: there are different opinions about the origin of the mix. Ewing believes that all pure bone myxomas originate initially from cartilage. Kodman, myxoma is considered as an atypical fibroma or chondroma. However, others (G.P. Vinogradova), believes that myxoma can arise from local non-differentiated cells of mesenchymal origin.

Clinic of thickening of the jaw bone, deformation of various sizes. Dense, smooth, painless formation in individual patients painful submandibular lymph nodes are felt. A symptom of Vincent is sometimes observed, and teeth cleansing are also considered.

X-ray picture. Distinguish between strong and oval areas of bone destruction. Bone bars are observed against the background of destruction. In the upper jaw, the lesion site more often appears to be uniformly enlightened, which makes it look like a jaw cyst.

Myxoma consists of stellate cells with a round or oval chromatin-rich nucleus. These cells are located in a jelly-like basic substance with single collagen fibers.

Treatment: resection within healthy tissue.

Osteogenic sarcoma is an extremely malignant tumor originating from bone tissue itself, as a rule, it is observed by a lesion of one bone and this distinguishes osteogenic sarcoma from reticular sarcomas.

According to prof. Kolesova A.A. osteosarcoma is a broad concept and any form of bone sarcoma can be attributed to it: osteogenic, chondro and entosarcoma of the bone, and in his opinion it is not rational for the clinic.

With osteogenic sarcoma of the jaw, it is difficult to give a scheme for the development of the initial symptoms of the disease. In some cases, the first manifestation of the disease is pain in one of the intact teeth, in others an unpleasant itching in the gingival margin, the teeth begin to loosen.

On the upper jaw, before the appearance of a pronounced tumor, unpleasant, difficult to perceive sensations can occur. Sometimes, before the onset of pain, a violation of sensitivity (paresthesia) was noted in the branching area of the infraorbital or chin nerve. These paresthesias may not be permanent and passable.

A swelling of various sizes and densities appears, moderately painful on palpation. With large tumors, swelling of the soft tissues appears, the saphenous and submucous veins expand, the skin over the tumor is thinned. With the development of osteogenic sarcoma near the temporomandibular joint, contracture occurs and mouth opening is severely limited. Subsequently, tumor decay is possible, a temperature of up to 39-40C appears, accelerated ESR.

In children, this disease develops rapidly and has a short and rapid course (from 1 to 6 months). Metastases occur in the lungs and other organs.

Osteogenic sarcoma is divided into osteolytic and osteoplastic osteogenic sarcoma. On the roentgenogram, the first is characterized by significant destruction of the bone with uneven, jagged, as if corroded contours. There is no violation of the border of the defect and merges with the shadow of the rounding soft tissues.

Osteoplastic sarcoma (osteogenic). The phenomena of pathological bone formation prevail. The x-ray in the initial stages of development of the sarcoma looks like a small, fuzzy outlined focus of bone compaction with a pronounced change in the periosteum in the form of acicular periostitis. Differential diagnosis is difficult in the initial stage. Suspicion of osteogenic sarcoma can cause the lytic form of osteoblastoclastoma, osteoma, fibrous dysplasia, eosinophilic granuloma, Ewing's sarcoma. Combined treatment.

FIBROSARCOMA: develops from connective tissue and can be central and peripheral, arises from the periosteum. It is located outside the bone and grows mainly towards the soft tissues or in the oral cavity. Central fibrosarcomas develop in the thickness of the bone from the connective tissues of the bone marrow stroma.

Peripheral fibrosarcomas in the initial stages are detected by slight reddening of the mucous membrane, unpleasant sensations, a swelling appears, associated with a thickening of the periosteum.

The swelling slowly grows and sometimes reaches large sizes. In case of damage to the upper jaw, narrowing of the palpebral fissure, deformation of the wing of the nose, smoothness of the nasolabial furrow and limited opening of the mouth can be observed.

With a large tumor, the skin is thinned, pale bluish in color. In the later stages, the tumor is motionless, soldered to the skin, tightly elastic. A little painful on palpation. Its surface is smooth or coarse-hilly. X-ray periosteal fibrosarcoma is observed quite clearly defined, low-intensity, uniform formation of an irregularly rounded or oval shape located on the bone. The surface of the jawbone at the site of the onset of the tumor acquires an arc-shaped defect with even, smooth contours in a thinned kartikalnoy layer of the jaw. In patients with central fibrosarcoma in the thickness of the affected jaw, significant destructive changes in the spotted-focal restructuring of the bone or osteolytic focus are usually determined.

Fibrosarcomas in the upper jaw are more malignant than in the lower jaw and their prognosis is worse. The treatment is combined, the operation is radical.

Myxosarcoma is rare, prone to relapse, metostasis, observed late. On the roentgenogram, along with coarse-cellular changes in the bone, the rest of the reaction can be noted in the form of thin resections of the jaw. Surgical treatment. On the roentgenogram along with coarse-cellular changes in the jaw bone, a periosteal reaction in the form of thin needles can be noted.

Chondrosarcoma is not sensitive to radiation therapy and therefore must be surgically removed. Radiation therapy does not give a therapeutic effect. Relapses are frequent, so the electrosurgical reaction in compliance with ablastic and anti-regional rules ensures the reliability of the operation.

Ewing's sarcoma is a relatively rare tumor, they account for 1% of all primary malignant tumors of the bones of the face.

Ewing tumors occur exclusively at a young age of 4 to 25 years with a peak at 13 years.

Of 323 patients with Ewing's tumor, only 11 found tumors in the jaw bones. They are more common in the lower jaw. Clinic. The disease can begin with bouts of aching, dull pain in the affected area, a burning sensation and heat, which will soon become loose teeth, swelling of the soft tissues surrounding the jaw and fever up to 39-40C. In patients at times, along with general weakness and increasing weakness, a fever, leukocytosis, accelerated ESR, and secondary anemia are determined.

The skin and mucous membrane are covered with a tumor, moderately hyperemic, hot to the touch, tense and may look like fluctuation. After some time, the pain subsides or even disappears, the swelling becomes less pronounced, and the mobility of the teeth decreases slightly, but then the disease worsens with renewed vigor. The size of the tumor sometimes increases, then decreases. It can be easily confused with picture-sharp or subacute-odontogenic osteomyelitis. From the appearance of the first signs of the disease to going to the doctor usually takes from 2 months to a year. A tightly spilled, painful swelling is already clearly palpable to this premium.

An important feature of Ewing's sarcoma is its ability to metastasize to regional and more distant lymph nodes, as well as other bones, primarily to the spine, then the skull and ribs.

Multiple metastases can occur in the first months after the start of the initial multiple localization of the tumor. This is different from osteogenic sarcoma, which in exceptional cases moves to other parts of the skeleton.

The X-ray picture of Ewing's sarcoma is manifested in the form of destructive changes, such as with reticular sarcoma, eosinophilic granuloma, osteogenic sarcoma, and metastases of sympathicoblastoma. The question of the true tumor cannot be resolved without histological examination. The main method of treatment is radiation therapy, c.t. the tumor itself and metastases highly sensitive to this type of treatment. Under the influence of radiation treatment, improvement often occurs, pain disappears, the general condition improves, and the tumor grows smaller. Destructive foci in the bone are replaced by newly formed bone tissue.

Reticular sarcoma grows slowly and in the first stages of its development is quite benign, this explains the fact that patients often seek medical help for the first time 1-2 years after the first clinical signs of a tumor appear.

At times, as with Ewing's sarcoma, there may be concomitant local inflammatory events with fever and ESR, moderate leukocytosis. The general condition of children, even with extensive tumors, remains good for a long time. Inconsistency between the patient's condition and significant changes determined in the bone at the site of its lesion is considered characteristic of reticular sarcoma. Patients usually see a doctor 6 months after the onset of the first clinical signs of a tumor. In young children, the course of reticular sarcoma is more rapid. Deformation of the jaw is accompanied by manifestations of inflammation. There are metastases in the lungs and bone apparatus (according to S.A. Reiberg, in 12-15% of cases). The x-ray picture is diverse. Often, the destruction of the jaw bone on the x-ray is spotty due to the large number of rounded or oval foci without clear boundaries. Dif Diagnosis is with lytic osteogenic sarcoma, osteoblastoclastoma, and osteomyelitis. Treatment: there is a high sensitivity of the reticular sarcomas to radiation energy. Most authors recommend x-ray therapy. After it, the condition of patients usually improves and favorable results can be observed up to 20 years. Conduct chemotherapy. If radiation therapy and chemotherapy does not eliminate the process, an operation to remove the jaw is indicated.

Features of the diagnosis and treatment of tumors of the jawbones in children.

Early diagnosis of a facial skeleton tumor in children is difficult, because often the focus lies deep in the jaw bone and the child is not able to explain and formulate his complaints in the early period. All this is also because at this time there is teething and tooth change, the continued growth of the jaws, the constant presence in the oral cavity of abundant microflora is capable of secondary infection.

Early diagnosis is also complicated by the similarity of individual facial bone formations with each other. Therefore, the diagnosis of facial skeleton tumors is a difficult and responsible task - it is necessary to approach only from the point of

view of the integrated use of existing diagnostic methods. Anamnesis - examination, i.e. clinical data must be combined with laboratory, x-ray, histological and cystological diagnostics.

Efficacy of treatment tumors jawbones depends primarily , on the timely and correct diagnosis.

When removing benign tumors, one should adhere to an early radical removal of benign tumors in order to avoid relapse or malignancy.

The main method of treatment of primary malignant tumors is a complex- surgical, radiation, chemotherapeutic and th. To address the specific treatment, all malignant tumors are usually divided into four stages:

1) initial without metastases

2) the stage of the developed process without switching to soft tissues

3) stage with the transition of the tumor to soft tissues, or without metastasis.

4) the stage of a far advanced process with metastasis.

Before the operation, preparation of the sick child and parents for the operation is necessary. Sanitation of the oral cavity, preparation of an immobilizing apparatus, postoperative prosthesis are required.

The type of operation depends on the nature of the tumor, its location, tendency to relapse, the age of the child.

Curettage is performed with clearly limited benign tumors: eosinophilic granuloma, fibroma, cystic osteoblastoclastoma. Curettage is reliable when you can have access to the entire tumor and where you need to carefully process milling. Teeth near the tumor can sometimes be saved, however, they must first be treponded and filled.

Jaw resection is indicated for malignant tumors and tumors prone to relapse (chondroma, myxoma, etc.), as well as for extensive benign tumors. Resection of the jaw can be partial and complete. Of great importance is the compensation of defects of the lower jaw after resection. As a plastic material, frozen formalin or morphilized homocost is used .

Tomography. In children with deforming arthrosis of temporomandibular Soest and Islands there is a need and you Status Closed tomograms straight in front of the fronto-nasal or rear projection. A layered study of these patients sometimes makes it possible to resolve diagnostic difficulties. In particular, direct Tomo grams unable to claim thinned joint space, which sometimes can not be seen on the side of the joint tomograms.

In recent years, when diagnosing diseases of the temporomandibular joints, zonography, which is a modification of the tomographic study with an increase in the thickness of the secreted section, has been used. When zonography of the temporomandibular joints, the thickness of the secreted layer is about 2 cm . In fact, the method occupies an intermediate position between radiography and tomography.

According to the authors, zonography in the study of temporomandibular joints is a method of choice . This technique has advantages over the assertion flown to imaging in clinical practice, we conclude aspirants in l uchshey

contrast and greater obe m Nosta perception. In addition, zonography reduces irradiation due to a shorter exposure time of 0.5 s (compare with exposure with tomography equal to 2.5 s).

Panoramic tomography . The beginning of the practical use of panoramic tomography (orthopantomography) dates back to 1949 . (Paatero). The method is applied GLA in nym way in dentistry and provides WHO possibility to obtain cross-sectional image of the entire dental system as a single functional complex. The image on the film f on Luciano MULTI to increased, and differently in the central and lateral parts of the jaw. Image jaws just come back, as it were rectified, combined with layer, several fuzzy in the central parts chelyu stey

The simplicity of the study and the small radiation load when performing panoramic tomography draw attention to the use of this technique in children's practice and during the clinical examination of the population. Based on our experience with the op topantomografii we recommend the use of Meto but the secondary d e forming osteoartrozeu children with hypoplasia of the mandible branch. Obtaining on one x-ray image of both halves of the lower jaw makes it possible to conduct a comparative assessment of the right and left sides.

X-ray diffraction. Currently, the possibility of xeroradiography and electron in Diagne temporomandibular joint disorders Stick tries to dyatsya under study.

However, the higher radiation exposure during X-ray diffraction compared with conventional X-ray examination is somewhat alarming when it comes to the study of children.

Contrast study . A contrast study is used to diagnose diseases of the temporomandibular joint [Rabukhina N.A., 1968]. Under local anesthesia, a joint area of the joint smallness of 0.8-1.5 mm are introduced into 35% d strength solution kardiotrasta. Radiographs and tomograms of the joint are produced in direct and lateral projections. Based on a study of patients with traumatic joint injuries, the author believes that arthrography provides comprehensive information about the state of the capsule, articular cartilage and intraarticular meniscus.

Computer transaxial (Tran Swersey Ordering) tomogr and FFL. The method was proposed and developed in 1961-1972. Hounsfield in Great Britain. It is based on the unequal absorption coefficient of X-rays by different body tissues. Pathological changes in various organs are manifested in areas with either a high or low absorption coefficient , and sometimes an alternation of both is noted. The most widely used method was obtained in neuroradiology.

Practical lesson №1

Subject: The born cleft lip and palate. Classification. Clinic, diagnostics. Early anatomical and functional disorders and methods for their elimination. Dates and methods of surgical treatment of congenital cleft palate.

T echnology cal model of the formation

Lesson time : 2 hours	Number of students 8-10
Type of occupation :	Introduction of practice news
Plan:	Familiarization with the topic
The objective of the training session :	Examine the born clefts of the upper lip and palate. Classification. Clinic, diagnostics. Early anatomical and functional disorders and methods for their elimination. Terms and methods of surgical treatment of congenital clefts of the upper lip and palate.
Training Methods :	Conversation, visual aids on practice
Type of occupation :	general - collective
Visual Aids on the topic :	Textbook , practical material , projector, computer
Situation for the lesson :	Metodi Cesky equipped audience
Monitoring and evaluation criteria :	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 Milestone	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work;	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions

	4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	
The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Questions on the topic :

1. Etiological factors (exogenous and endogenous) of the occurrence of congenital cleft palate.
2. Embryopathogenesis of congenital cleft palate.
3. Classification of congenital cleft palate.
4. Clinical and morphological characteristics of various forms of congenital cleft palate.
5. Radical uranoplasty according to A. A. Limberg: goals, objectives, stages of the operation.
6. Modern methods of surgical treatment of cleft palate, the optimal timing of surgical intervention.

Practice Text

Anatomical and functional disorders in congenital cleft palate require surgical, orthodontic and speech therapy treatment. Of the anatomical violations of the structure of the palate , three main ones should be distinguished, which cause severe functional changes and require surgical removal: cleft palate, shortened soft palate and the expanded middle section of the pharynx.

Cleft palate in anatomical shape and size can be different. There are hidden crevices located only within the muscle layer of the soft palate or bone tissue of the hard palate with a well-developed layer of the mucous membrane.

Clefts of only the soft palate, which can be incomplete and complete, are also observed. Incomplete clefts of the soft palate do not reach the border with the hard palate. The visible part of the complete cleft of the soft palate reaches the posterior edge of the hard palate and is often accompanied by latent underdevelopment of the posterior part of the hard palate.

There are crevices of soft and hard palate, which can also be incomplete and complete. Complete crevices extend to the incisal opening. Clefts of the soft and hard palate are always located in the midline of the sky. In this case, the opener base lies freely, without connecting with the palatine plates. Complete clefts of the palate and alveolar process pass in the anterior part of the palate along the border of the incisal bone with the palatine plate and extend to the alveolar process through the second incisor or between the first and second incisors. Therefore, distinguish between unilateral and bilateral crevices. With complete unilateral clefts of the upper lip, alveolar process and palate, the base of the vomer is

connected to the edge of the palatine plate, the opposite side. In this case, as a result of a violation of muscle balance, deformation of the alverna process of the upper jaw is observed.

In addition to deformation of the upper jaw, with cleft palate, congenital maldevelopment of the muscles of the soft palate and the middle part of the pharynx is observed. The soft palate is short, underdeveloped palatine muscles are not fixed to each other in the midline. The inferiority of the muscles of the soft palate and pharynx is observed even with hidden crevices, which is not taken into account by some doctors in the treatment of this form of pathology. From the first days after birth, a disturbance in the function of sucking and swallowing is detected. In a child with a cleft palate, the oral cavity freely communicates with the nasal cavity, which makes it impossible to create tightness in the oral cavity during sucking. The child does not take the mother's breast, and with artificial feeding it is easily choked and can aspirate liquid food.

When inhaling, large portions of unheated outside air easily pass from the nose into the oral cavity and upper respiratory tract, causing irritation of the mucous membrane. Children get used to breathing superficially, taking a shallow breath and a weak exhale. They easily get pneumonia.

The weakness of exhalation subsequently negatively affects the formation of the child's speech. Children with cleft palate utter words inaudibly, in a quiet voice. With a cleft sky, the palatine, palatine-lingual, all the nibbling sounds of our speech sound wrong. Speech has a pronounced nasal tone.

The constant ingestion of liquid and soft food from the oral cavity into the nasal cavity causes irritation of the nasal mucosa and nasopharynx, which leads to the development of persistent foci of chronic inflammation in this area.

Classification. In the clinic of the Department of Pediatric Dentistry of the Moscow Medical Dental Institute, the following clinical and anatomical classification is used to diagnose palatal clefts:

1. Congenital cleft soft palate:
   a) hidden;
   b) incomplete;
   c) complete.
2. Congenital cleft soft and hard palate:
   a) hidden;
   b) incomplete;
   c) complete.
3. Congenital full clefts of the soft, hard palate and alveolar process (unilateral and bilateral).
4. Congenital clefts of the alveolar process and the anterior section of the hard palate:
   a) incomplete (unilateral and bilateral);
   b) complete (unilateral and bilateral).

Cleft palate occurs in combination with crevices of the upper lip. In this case, various forms of cleft lip can be combined with various forms of cleft palate. The first two groups of cleft palate of our classification are considered by some authors

as crevices of the secondary palate, the fourth group in combination with crevices of the upper lip, as crevices of the primary palate, and the third group, as crevices of the primary and secondary palate.

SURGICAL TREATMENT OF SKIN

The question of the timing of operations for congenital nonunion of the palate has been studied for many decades. Currently, it is believed that children with this pathology should be operated on at that age so that they can finish treatment by the start of school, i.e. to 7 years of age. Modern methods of radical uranoplasty can reduce the invasiveness of surgery and recommend these operations not only in the late preschool age (5-6 years), but also in the early 2-4 years. According to L.V. Kharkiv (1992) the most favorable time for conducting uranostaphils on plastics should be considered the age of up to 2-3 years.

PI. Semenchenko and V.I. Vakulenko (1968) recommend an isolated partial non-fusion of the soft palate (in the absence of shortening of the palatine curtain and expansion of the mesopharynges) to operate at 1-2 years of age, and plastic closure of the hard palate should be performed at 4-5 years of age. According to the studies of these authors, organic and functional changes in the ENT organs, respiratory tract, as well as changes in the neuropsychic sphere in patients occur from 4-5 years of age. Carrying out X-ray measurements of skulls in 200 children with nonunion and 600 normally developed children, WM Krogman (1954) found that impaired growth of the facial skeleton with nonunion is directly dependent on the size of the defect. The author considers the age of 4-6 years to be the best time for the operation. B.N. Davydov and R.D. Novoselov (1997) at the age of 3-5 years old operate on patients with not through the cleft palate, and at the age of 5-6 years old - through one- and two-sided clefts. According to these authors, conducting such operations at an earlier age can lead to a slowdown in the growth of the upper jaw. Based on numerous studies A.N. Gubskaya (1975) recommends eliminating isolated nonunion of the palate at the age of 4-5 years, and combined at an older age. When applying early cheiloplasty by an irrational technique, not only rough scars on the lip arise, but postoperative deformities of the upper jaw. H. Schweckendieck (1956), fearing that surgery in the hard palate might entail a delay in the growth of the upper jaw, suggested that the palatal fusion be operated on in two stages. At the first stage (at the age of 4-6 months), soft paloplasty (veloplasty) should be performed, and at the second stage (at the age of 6 years), plastic surgery of the hard palate.

E.N. Samar (1971) also indicates the possibility of cycle repair at the age of 1 to 2.5 years, and uranoplasty - from 2.5 to 4 years.

According to Yu.I. Vernadsky (1985), with partial non-fusion of the hard and the entire soft palate, the operation should be performed at the age of 6-7 years, and with defects of the whole palate, alveolar process and lip - 7-8 years.

The use of spectral analysis of speech made it possible to prove that those patients who received primary plastic surgery in the sky at a preschool age and speech therapy classes before and after the operation achieve normal rates faster (NA Miroshnichenko, 1991). Before the operation, the child needs to

undergo general strengthening therapy, sanitize the oral cavity and nasopharynx, and also make a protective palatine plate from plastic.

Uranoplasty (Greek igapov - sky + plastic; synonym - palatoplasty) - the general name of plastic surgery to eliminate defects of the hard palate.

Uranostaphyloplasty is the name of plastic surgery while eliminating defects in hard and soft palate.

Staphylography - suturing the cleft soft palate. A classic example of the operation of plastic closure of a defect in hard and soft palate is *radical uranoplasty* according to A.A. Limberg (1927). The main stages of the operation *:*

- refreshment of the edges of the defect within the hard palate by excision of the strip of the mucous membrane along the edges of the nonunion;
- the formation of mucoperiosteal flaps on a hard palate according to Langenbek-Lvov (they are necessary to close the defect of the palate and alveolar process);
- dissection of the nasal mucosa along the posterior edge of the palate;
- resection of the posterior-inner edge of the large palatine opening, i.e. removal of the neurovascular bundles of the sky from large palatine openings;
- sections along the pterygo-mandibular folds from their upper sections to the lingual surface of the alveolar process of the lower jaw in the region of the last molar (sections

according to Halle-Ernst);

- mesopharyngoconstriction (narrowing of the middle section of the pharynx);
- interlaminar osteotomy (longitudinal dissection of the pterygoid process), break the inner plate at its base and displace it inside with the attached soft tissues with subsequent tamponade of the bone wound with a gauze swab;
- refreshing the edges of the soft palate defect by stratification;
- stitching the halves of the soft palate with a three-row suture (mucous membrane from the side of the nose, muscles and the mucous membrane of the soft palate from the side of the oral cavity);
- stitching flaps of the hard palate with a two-row seam;
- replacement of the gauze swab in the near-pharyngeal niches with an iodoform and coating of the postoperative wound (palate) with an iodine swab;
- application of a protective palatine plate.

Improving the methods of uranostaphyloplasty Yu.I. Vernadsky (1968) developed five versions of the methodology for conducting a radical operation, which have common features:

a) the deliberate intersection of the neurovascular bundles emanating from large and small palatine openings;

b) elimination of the defect in the anterior region of the palate due to the overturning of one or two flaps, cut out at the edges of the cleft;

c) creating a duplicate of the mucous membrane within the posterior third of the hard palate and at the place of its transition into the soft palate (due to the mucous membrane of the bottom of the nose);

d) interlaminar osteotomy according to A.A. Limberg and mesopharyngoconstriction according to Ernst culminate in the introduction into the

peri-pharyngeal niches of skeins of catgut threads, and between the split plates of the pterygoid processes - a bone or cartilage allograft;

e) the operation ends with a dull suturing of the near-pharyngeal niches due to mobilization of the flap of the mucosa from the retro-molar region. Indicating the effectiveness of these techniques are uc following IM Got (1970), R.N. Chekhovsky (1982), S.A. Abrakhmanova (1991) and others.

G.I. Semenchenko and V.I. Vakulenko (1974) developed a method for the repair of the palate using bone grafting of the canned defrost by freezing, which restores the shape of the palate and supports the muscles of the palatine curtain that were moved back. B.N. Davydov (1984) offers a technique for osteoplastic restoration of the palate with simultaneous correction of the muscles of the soft palate.

L.V. Kharkov (1987) developed a technique of uranostaphyloplasty, which involves cutting out one sliding mucoperiosteal flap from a large fragment, Z-plastic in the area of the border of the hard and soft palate, and closing the wound surface in the sky with a flap on the leg from the cheek. L.V. Kharkov proposed a technique of uranostaphyloplasty using a coulter flap and conducting retro-transposition without cutting out angular flaps in the soft palate.

As post-operative dressings to the upper jaw wear protective w n lastinku made in advance, under which are placed several layers of cheesecloth. The plate can be made from several layers of gauze soaked in a solution of celluloid in acetone (A.I. Evdokimov), from celluloid (A.A. Limberg), from acrylic (A.I. Evdokimov, N.M. Michelson) or quick-hardening plastic. If the plate does not hold well on milk teeth or with a removable bite, it can be relocated using quick-hardening plastic. This allows you not to resort to mounting the plate to the head cap, as some authors recommend.

To create a wound of rest for 10 days, they begin a regime of silence. Every day after the operation, a thorough toilet is carried out by irrigation of the oral cavity from the Esmarch mug with a warm solution of potassium permanganate in a dilution of 1: 5000. Irrigation is repeated 4-5 times a day after meals. The first dressing is done on the 7th-9th day after the operation, during which the surgeon evaluates the results of the operation and removes the stitches . The following dressings are carried out every 2-3 days. During the dressings, the protective plate is removed, the tampons underneath are changed, the tampons in the lateral pharynx are pulled up and shortened as they are pushed out of the wound by the growing granulation tissue.

On the 15-16th day after the operation, they begin to form the arch of the sky. The formation of the arch of the sky is necessary for setting the correct speech of the child after the operation. For this purpose, the impression mass is layered on the inner surface of the protective plate so that it squeezes up the tissue of the posterior sections of the hard and soft palate. As the scars are smoothed out, the thickness of the mass layer is increased. After surgery, the child has a record of up to $1\ ^{1}/_{2}$ months. It is allowed to remove it for meals, speech therapist and sleep.

After surgery, children need to be fed liquid high-calorie foods. The daily diet of the child should include milk, sour cream, butter, fresh eggs, strong broth, jelly. Food should be quickly absorbed and easily swallowed.

Clinical lesson №1

Mavzu: To the born clefts of the upper lip and palate. Classification. Clinic, diagnostics. Early anatomical and functional disorders and methods for their elimination. Dates and methods of surgical treatment of congenital cleft palate.

T echnology cal model of the formation

Lesson time: 2 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1 . Classification of congenital clefts of the upper lip and palate . 2. Diagnostic methods in the clinic. 3. Assistance in anatomical and functional disorders. 4. Methods of operations, the optimal timing and their application. 5. Features of postoperative care for children with ARH.
The objective of the training session:	Learn to diagnose Frolova in children with congenital clefts of the upper lip and palate. Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination , collection history and , to write a history of the disease , the conversation .
Type of occupation:	Mass-collective , trans Sonal ny
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror , pin p is, spatula s , l of current desks to the doctor and an alcohol, furatsilin, gauze evye beads , stearyl nye gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis , assessment , oral control , question and answer

Practical lesson number 2

Topic: Atypical cleft face , clinic, diagnosis. Congenital cysts and fistulas of the face and neck . Etiology, clinical manifestations. Diagnostics, differential diagnostics. Methods of surgical treatment.

T echnology cal model of the formation

Lesson time : 3 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	Examine atypical facial clefts , congenital cysts, and facial fistulas . The etiology w clinically x manifestations. Diagnostics , differential diagnostics. Methods of surgical treatment. TMJ diseases in children.
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical material , projector, computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia;	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions

	3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	
3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive method

The use of "hot potato "

Practice Text

Syndromic nonunions of the lips and palate account for 10% of all nonunions of the face. Currently, about 300 syndromes associated with malformations of the face, jaw and teeth have been described. Of these, according to recent data, 70% belong to hereditary diseases and about 30% to teratogenic malformations. The types of heredity are not well understood.

The most common syndromes are: Pierre-Robin anomalade, Van der Wood, Tricher Collins, Aper, hepatodital, orofacial digital syndrome, EEC syndrome, lip and palatine nonunion syndromes, combined with ectodermal dysplasia, with pterygoid folds on the neck and in the area of joints, with anomalies of the thumbs of the hand and microcephaly; syndromes of chromosomal aberrations, syndromes I - II branchial arches, micro- and makrostomii etc. Very rarely observed congenital nonunion nose , "Siamese twins" with cleft lip and palate

Pierre-Robin Syndrome. The type of inheritance is unknown. Congenital hypoplasia of the lower jaw, micrognathia, non-fusion of the palate. Anomalies of the tongue: glossoptosis, macroglossia.

30% of these children are diagnosed with congenital heart defects, abnormalities of the eyes, auricles, skeleton, etc. Mental retardation is often determined. After birth, the baby breathes poorly as a result of a small lower jaw and a large tongue that moves posteriorly. Sometimes the tongue is attached to the soft tissues of the bottom of the oral cavity. During sleep, attacks of asphyxia occur. To normalize the child’s breathing, they are placed on the stomach, in severe cases, the tongue in the extended position is fixed to the tissues of the oral cavity. The prognosis is favorable with adequate early orthodontic treatment - an obturator is made so that the baby can suck. Nipple feeding without an obturator is excluded. In severe cases, probe feeding is used for some time. Surgical methods of treatment are also used - moving and fixing the tongue in a new position (anterior to the previous one).

Van der Wood Syndrome . Inherited by an autosomal dominant type. Characteristic are congenital symmetrical fistulas of the mucous glands on the lower lip, combined with nonunion of the upper lip (most often with bilateral

through). At a genetic consultation, parents should be advised of a high (50%) risk for offspring. Surgical treatment, from 3 months to 1 year - cheiloplasty, from 1 year to 2 years - uranostaphyloplasty, after which - removal of fistulas on the lower lip.

Tricher Collins Syndrome. The type of inheritance is unknown. Congenital syndrome with a typical set of symptoms: deformation or hypoplasia of the zygomatic processes of the frontal and temporal bones, underdevelopment of most of the zygomatic arch, lower orbital edges are shifted downward, orbits are deformed, there may be no external auditory passage; deformation of the pterygoid process of the sphenoid bone, upper and lower jaws, partial nonunion of the palate; fistulas on the lower lip, asymmetry and deformation of the skull are often observed. The chin may be underdeveloped, the nose may be deformed.

Surgical *treatment* , multi-stage.

With indrome Franceschetti (cranio-che maxillofacial dysostosis). The type of inheritance is autosomal dominant. A complex of congenital maxillofacial deformities accompanied by a large, half-open mouth. The upper jaw is hypoplastic, with reduced sinuses. High palate. The underdeveloped lower jaw gives the face an avian appearance; epicanthus, antimongoloid eye incision are possible as a result of bilateral hypoplasia of the zygomatic bones and arches. Hypoplasia of both wings of the nose is determined , which can lead to narrowing of the nostrils. The main signs of this syndrome include the absence of eyelashes on the lower eyelids, the presence of a coloba, temporal-presetal hair growth . Often there is atresia of the external auditory canal, complete deafness. In 50 *% of* cases it is hereditary.

The treatment is complex, long and multi-stage.

Otopalatodigital syndrome is quite common in the practice of a dental surgeon. It is manifested by deafness, non-fusion of the palate, dystrophy of the face and skull (frontal tubercles and superciliary arches, przheltelorizm, broad nose with a nose bridge, microstomy, micrognathia). Also observed are abnormalities of tooth growth, malocclusion, musculoskeletal deformities, wide and short nail phalanges, and mental retardation (Fig. 3.4).

The treatment is complex, multi-stage, long.

Orofacial-digital syndrome occurs in two versions: 1st — pro is multiple frenulum of the tongue and its partial nonunion, incoherent lip and palate, asymmetrically shortened fingers, tooth abnormalities, enamel hypoplasia. A wide nasal bridge, aplasia of the wings of the nose and auricles, epcanthus, etc. are also observed; 2nd version (Mohr syndrome) characterized by hypertrophy bridles, median psevdonesrascheniem upper lip, cleft palate nonunion, lack of central incisors, hypoplasia of the zygomatic arch and jaws, broad bridge of the nose and the coccyx (Fig. 3 . 5-3 . 8).

The EEC syndrome *(ectodactyli , ectodermal dysplasia and cleft palate s - m) is* characterized by single or bilateral non-fusion of the lips and palate, sparse and thin hair, dry skin, microdentia, a change in the normal shape of temporary and

permanent teeth, enamel hypoplasia, and lacrimal canal stenosis. Also observed hypoplasia of the upper jaw and multiple pigmented Neva-Si (Fig. 3 . 9).

The treatment is complex, multi-stage.

Hemifacial microsomy syndrome (Gill arches syndrome I - II). The type of inheritance seems to be autosomal dominant.

This is a group of defects resulting from violations of the formation of the I gill slit, 1 and II gill arches.

Characteristic features are: unilateral microgenia, micrognathia, underdevelopment of the zygomatic bone and arch, deformation of the outer ear, atrophy and paresis of the muscles of the face and palate, tongue, macrostomy, parotid fistulas and appendages. Syndrome I - II of gill arches also includes abnormalities of the central nervous system (oligophrenia), spinal deformities, malformations of the genitourinary system, digestive canal, congenital heart defects, blindness, etc. Nonunion of the upper lip and palate are often diagnosed (Fig. 3.10 - 3.13). *The treatment is* complex, long.

Aper Syndrome *(Apert)* refers to the complex syndromes of the maxillofacial region and skeleton. Clinical signs of it are hypertelorism, a wide nose bridge, flat eye sockets, eye-eyes, non-fusion of the palate, weak eyesight. There are changes from the side of the skeleton - small stature, polydactyly. This syndrome is accompanied by mental retardation (Fig. 3.1 4). *Treatment*, as in previous syndromes, is multi-stage, complex.

Klippel-Feil Syndrome *(Klippel - Feil).* In the oral cavity, the syndrome is manifested by malocclusion, nonunion of the hard and soft palate, tooth deformities, and jaw cysts. The appearance of the patient has a typical sign - a short neck (the head "sits" on the shoulders), head movements are limited. This is due to the fact that the I vertebra merges with other vertebrae or is synostosed with the occipital bone.

In addition to these symptoms, anomalies of the ribs, congenital heart defects, and a high location of the shoulder blades are observed.

Multi-stage and long-term *treatment is* carried out by appropriate specialists. At the age of 1-2 years, uranostafploplasty is performed, if there are no general somatic contraindications, if jaw cysts are detected, surgical treatment: cystotomy, cystectomy. Correction of occlusion and tooth deformations is carried out by an orthodontist.

Macro- and microstomies can be congenital and accompany various syndromes defined in the maxillofacial region, and acquired, resulting from burns, injuries, surgery, radiation treatment, etc. Macro- and microstomies are accompanied by functional disorders (salivation, pouring out food from the mouth, limited opening of the mouth with microstomy, impaired diction) and various cosmetic deformities.

Over 30 syndromes can be accompanied by macro- and microstomies: Wolf-Hirschhorn syndrome - 4p chromosomes (microstomy); Goldenhar syndrome - sculoauriculovertebral dpsplasma (macrostomy); Kazen syndrome

(microstomy); Tricher-Collins syndrome (macrostomy); Franceschetti syndrome (macrostomy); Freeman-Sheldon's syndrome - craniocarpotarsal dysplasia (microstomy); Hanhart syndrome - hypoglossia-hypodactyly syndrome, aglossia-adactyly syndrome (microstomy); chromosomes 14p, 18d syndrome (micro- and macrostomy, respectively), etc.

In all cases, *therapeutic* tactics are the only ones - surgical intervention, which involves expansion with microstomy, and narrowing of the mouth gap with macrostomy. There are many ways to eliminate these deformations: according to A.I. Evdokimov, G.O. Vasiliev using triangular flaps, local plastics according to Yu.K. Shimanovsky. In each case, depending on the degree of dysfunction, the manifestation of cosmetic defects, one or another technique is used.

BRUSHES AND FISTALS FACES, NECK

Cysts and fistulas are divided into lateral, median, parotid.

In turn, fistulas are classified as follows (scheme 3. 1).

Median cysts and fistulas of the neck

Median (thyroid-lingual) cysts of the neck belong to abnormalities of the development of the gill apparatus and its derivatives (thyroid and sternal glands). According to $_0$f $_{IC}$ statistics, congenital cysts of the neck develop on average in one out of 3000 newborns. Clinically appear at 4-7 years of age (2/3 of patients) or at the age of 10-14 years, which may be associated with hormonal changes in the body.

The median (thyroid-lingual) fistulas of the neck are the result of non-obstruction of the thyroid-duct, which is evidenced by their connection with the hyoid bone and the blind opening of the tongue, as well as the correspondence of the course of the complete median fistula to the topography of the primordium of the thyroid gland. Such fistulas are primary. Secondary are formed due to suppuration of the median cyst.

There are few *complaints* with median cysts. The child or his parents indicate the presence of a painless, long-existing ball in the midline of the neck, sometimes gradually increasing in size. Cysts can fester, and then complaints arise, as with abscesses; with median fistulas - for the presence of a "point" through which the mucous contents are secreted.

Clinic. A non-suppurative median cyst is defined in the projection of the front surface of the neck as a tumor-like formation of a rounded shape, with clear boundaries, a tight-elastic or pasty-like consistency that shifts when swallowed along with the body of the hyoid bone (Fig. 3.21 , 3.22). This occurs due to the cord connecting the cyst with the body of the hyoid bone.

If the cyst is connected with the oral cavity through a cord, then its size can periodically decrease after the contents are released into the mouth.

Quite often (in 60 %), median cysts can become inflamed and suppurate. This is manifested by pain when swallowing, inflammatory infiltrate on the front of the neck with hyperemic skin above it. Such cysts resemble an abscess in the clinical course.

The median fistula of the neck opens with an opening of small size on the front surface of the neck, above or below the projection of the hyoid bone, through

which the transparent mucous contents stand out (Fig. 3.23 , 3.24). Sounding reveals the course of the fistula, leading more often to the hyoid bone. With suppuration of the fistula, a painful infiltrate appears, the discharge becomes purulent. If the opening of the fistula closes, then pus accumulates in it, which leads to the formation of an abscess and requires immediate opening and anti-inflammatory therapy. For the diagnosis, such additional examination methods are used: sounding or fistulography with radiopaque fluid; Ultrasound, diagnostic puncture of the cyst - receive a mucous transparent liquid of yellow color.

Differential diagnosis of cysts should be carried out with a dermoid cyst and chronic lymphadenitis of the submental area, cysts of the hyoid salivary gland, thyroid gland, atheroma, and "cold" abscesses of the submental area.

Surgical *treatment of* cysts. A cystectomy is performed under an intravenous narcotic goat. An incision of the skin and subcutaneous adipose tissue is done in parallel with the clutches of the neck or vertically along the midline of the neck. Stupidly and acutely isolate and remove the cyst together with the membrane within healthy tissues. To prevent relapse, a part of the body of the hyoid bone must be resected . Heer urgi often do not do this, forgetting that it is from the inside that the body of the hyoid bone penetrates the cord that connects it with the cyst.

When suppuration of the cyst, an autopsy is performed followed by a prolonged training. Phenomena of inflammation in the cyst and surgical intervention may subsequently cause scarring of its cavity. But if the cyst "recovered", then it must be removed only after 2-3 months after the elimination of the inflammatory process.

The surgeon has certain difficulties in removing fistulas, since their wall is very thin. In addition, the epithelial course of the fistula may not be one and additional thin thin fistulas are not visually detected, which, incidentally, explains their frequent relapses. With suppuration of the fistula, its walls become thicker, which subsequently facilitates the work of the surgeon. Before starting the removal of the fistula, a probe or a staining substance (methylene blue, diamond green) is introduced along the way, which allows you to examine its course. The obligatory stage of the operation is the resection of the hyoid bone body or the fistula to the blind opening of the tongue, where it ends, and a thorough examination of the wound in order to identify additional cords.

Lateral cysts and fistulas of the neck

Lateral cysts are the remains of the cervical sinus. They are localized in the upper neck in front of the sternocleidomastoid muscle between the internal and external carotid arteries. Lateral fistulas can be complete and incomplete (external and internal). External lateral fistulas of the neck are a consequence of the abnormal development of the second and third gill slots, which remain connected to the surface of the neck. Internal fistulas form very rarely. External open at the edge of the sternocleidomastoid muscle in the middle third of the neck, internal - on the palatopharyngeal arch at the base of the palatine tonsils.

Complaints Children or their parents complain about the presence of a long-existing painful deformity in the lateral neck, which can increase, sometimes become inflamed.

Clinic. In the upper side of the neck, a rounded neoplasm is determined, painless, limitedly mobile, soft elastic consistency. The skin over the neoplasm is not changed in color. If the cyst is inflated, then all the clinical signs of an abscess appear.

To confirm the diagnosis, a puncture is performed (mucous yellow transparent contents are obtained) or contrast radiography.

The lateral fistulas of the neck clinically manifest themselves as small in the form of a point of skin tension along the edge of the sternocleidomastoid muscle, with scanty licking transparent discharge. When a fistula is clogged, it can fester. To identify the fistulous course, it is necessary to probe and fistulography it.

Differential diagnosis is carried out with chronic specific and nonspecific lymphadenitis of the neck, dermoid cysts, salivary gland tumors, migratory granuloma in the maxillary region, lymphatic and reticulosarcoma of the neck, median cysts and fistulas of the neck, thyroid gland cysts .

Surgical *treatment of* lateral cysts and fistulas of the neck. With a cyst, it provides for the removal of the neoplasm together with the membrane, with fistula-excision of its course. Usually, lateral cysts and fistulas do not belong to diseases of the maxillofacial region, therefore, their treatment is more often carried out by general children's surgeons.

Parotid fistula

Parotid fistulas are abnormalities in the development of the cranial section of the first gill slit. They are localized in front of the base of the curl of the auricle and tragus. They may be on one or two sides and not manifest themselves throughout life; traceable heredity.

Complaints of parents or a child - about the presence of one or more holes in the parotid region near the earlobe, sometimes - about the release of mucous contents from them . With suppuration of the fistula, complaints of pain in this area and an increase in body temperature appear .

Clinic. Parotid fistula manifest themselves in small (2-3 mm in di ametre) inlets, which blindly ending in a ste nok on ruzhnogo auditory stroke (Fig. 3.25). When pressing on this area , a lard-like white mass stands out from the holes. Fistulography and sounding of fistulas are used to confirm the diagnosis .

Differential diagnos tic performed with chronic limfade nit in step suppuration - with abscess mi.

The treatment is surgical: radical removal of the fistula leading to the wall of the external auditory canal. If part of it is “lost” when the fistula is removed, it can become a source of the formation of retention cysts. In order to prevent relapses, in such cases adjacent tissues are removed along the fistula.

Clinical lesson №2

Mavzu: Atypical cleft face , clinic, diagnosis. Congenital cysts and fistulas of the face and neck . Etiology, clinical manifestations. Diagnostics, differential diagnostics. Methods of surgical treatment.

T echnology cal model of the formation

Lesson time: 3 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Types of atypical clefts of the face . Clinic, diagnosis, treatment. 2 . Congenital cysts and fistulas of the face and neck . Etiology, clinical manifestations. Diagnostics, differential diagnostics. Methods of surgical treatment. 3. Assistance in anatomical and functional disorders.
The objective of the training session:	Learn to diagnose children with atypical congenital clefts and cysts (fistulas) of the face and neck . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

Practical lesson number 3

Topic: Diseases of TMJ in children. Classification , etiology, diagnosis. Surgical treatments.

T echnology cal model of the formation

Lesson time : 3 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	To study the etiology, pathogenesis , clinic, diagnosis and treatment of children and adolescents with inflammatory diseases of the temporomandibular joint.
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical material, projector , computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions
3. The final stage	1. Conclusion . 2. Independent work .	Listen to Record Conclusion

	3. Homework .	

Test questions from related disciplines

1. Anatomical and topographic structure of the TMJ.
2. X-ray examination methods for TMJ.
3. Rules for the appointment of antibacterial, steroidal and non-steroidal anti-inflammatory drugs, their dosage depending on the age of the child.

Test questions on the topic of the lesson

1. Structural features of the temporomandibular joint in children at various age periods.
2. Classification of diseases of the temporomandibular joint in children and adolescents.
3. TMJ arthritis in children and adolescents. Classification, etiology, clinic, diagnosis, treatment.
4. Secondary deforming osteoarthritis of TMJ in children and adolescents. Etiology, pathogenesis, clinical features, diagnosis and treatment.
5. Bone ankylosis of TMJ in children and adolescents. Etiology, pathogenesis, clinical features, diagnosis and treatment.
6. Neoarthrosis. Etiology, clinic, diagnosis and treatment.
7. Etiology and pathogenesis of functional TMJ diseases in adolescents. Youthful TMJ dysfunction. Clinic, diagnosis and treatment.
8. Inflammatory and degenerative diseases of the TMJ. Clinic, diagnosis and treatment.
9. Dislocation of TMJ in children and adolescents. Classification, clinic, diagnosis and treatment.
10 . Methods of surgical treatment of TMJ ankylosis according to A.A. Limberg.
11 . The method of surgical treatment of bone ankylosis according to N.N. Kasparova.
12 . Features of X-ray diagnosis and treatment of TMJ arthritis.
13 . Myogymnastics and exercise therapy in the rehabilitation of patients with TMJ fibrous ankylosis.
14 . Features of the treatment of arthrosis in children.
15 . Prevention of arthritis and arthrosis in children.

Interactive method

Using the web method

Steps:

1. Previously, students are given time to prepare questions on the lesson.
2. Participants sit in a circle.
3. One of the participants is given a skein of thread, and he asks his prepared question (to which he must know the full answer), holding the end of the thread and transferring the skein to any student.
4. The student who received the skein answers the question (at the same time, who asked it, comments on the answer) and passes the baton to the question

further. Participants continue to ask questions and answer them until everyone is on the web.

5. As soon as all students finish asking questions, the student holding the hank returns it to the participant from whom he received the question, asking his question, etc., until the ball is completely "unwound".

Practice Text

The temporomandibular joint provides one of the most important functions - opening the mouth. The growth and development of the joint in a child can be accompanied by diseases, untimely or improper treatment of which leads to violations of this important function, underdevelopment of the lower jaw, pronounced aesthetic deficiencies.

Features of the structure and function of the temporomandibular joint

The temporomandibular joint (TMJ) was described in 1802 by the anatomist P.A. Zagorsky.

The structural features and functions of the TMJ are determined by the strength and tone of the masticatory muscles, the configuration of the articular surfaces, the shape of the intraarticular disk, bag and ligaments, bite, etc. This is the only joint performing atypical movements in three planes.

In a small child up to 7 months, the TMJ does not have any elements formed for the joint - the articular head, cavity. The joint head is covered with a thin layer of hyaline cartilage and the periosteum, and the articular fossa with the articular tubercle is only the periosteum with a well-developed cambial and fibrous layers. With age, instead of hyaline on the articular surfaces, connective tissue (fibrous) cartilage is formed. The articular fossa is flat, the articular surfaces are covered with delicate connective tissue cartilage. Only with the beginning of the eruption of permanent teeth, the articular process is finalized, the articular fossa becomes deeper. Movements prevail in the anteroposterior direction, and the lateral movements are almost absent. At the same time, the relationship between anatomy and joint function is very well illustrated. A baby sucks milk and does not chew solid food. Thanks to such movements of the lower jaw (in the front-back direction), congenital physiological microgenia is eliminated. Lateral movements are necessary for chewing solid food. Therefore, with age, with teething and strengthening of the masticatory muscles, the function of the joint becomes more complicated - movements develop in 3 planes.

The condylar process is a zone of longitudinal growth of the lower jaw. The incongruence of the joint is leveled thanks to the capsule and biconcave disc. The posterior arch of the articular fossa borders the tympanic cavity, which can contribute to the spread of inflammatory processes from the joint to the ear and vice versa. The veins of the joint are well anastomosed with the veins of the middle ear, auditory tube, external auditory canal, as well as with the pterygoid venous plexus. Venous blood flowing from the organ of hearing flows into the venous plexus of the joint capsule and only then, through the articular veins, reaches the facial vein (these pathways of infection must be remembered, because it is they

that cause the spread of the inflammatory process from one anatomical region to another).

The presence of common sources of animal *(item trigeminus)* and autonomic innervation explains the occurrence of ocular and ear symptoms in diseases of TMJ.

Causes of TMJ in children can be occlusal disorders, inflammatory processes in the dentition and chewing muscles, bruising and wounding of the joint, including trauma in severe childbirth, one-time short-term overloads of it, infectious, endocrine diseases, metabolic disorders and bone growth (mismatch between growth of the alveolar and condylar processes of the lower jaw), otitis.

The listed reasons are more often observed at a certain age. So, for example, inflammatory processes, which can result in severe complications in the joint, prevail in infants; traumatic injuries are observed in children 3-9 years old, which is anatomically justified - the neck of the articular process is the weakest point; occlusal disorders most often occur with final changes and the formation of a bite, which coincides with puberty .

In the XIX century Muller made the first attempt to classify TMJ diseases by separating inflammatory joint diseases (arthritis) from dystrophic (arthrosis). Now, in accordance with the most common classifications, they distinguish such nosological forms of TMJ diseases:

1. By etiological factors:

a) congenital malformations;

b) acquired diseases:

- inflammatory (arthritis);
- dystrophic (arthrosis, secondary deforming arthrosis);
- inflammatory-dystrophic (arthritis-arthrosis).

2. The course of the disease: acute, chronic, chronic in the acute stage.

3. Ankyloses (fibrous, bone):

- congenital and acquired;
- unilateral, bilateral;
- inflammatory, traumatic.

In all textbooks on surgical dentistry, ankyloses are divided into congenital and acquired. However, congenital should be understood as ankyloses that occur in the first 3-5 months after birth and are caused by joint injury during childbirth and septic conditions.

Examination of the TMJ to identify its diseases is carried out in the following sequence:

1. A survey of parents and the patient.

2. Inspection of the lower part of the face. Bimanually (after the introduction of two fingers on both sides into the external auditory passages), the movements of the lower jaw are analyzed. Palpation of joints and chewing muscles, assessment of occlusion and occlusal contacts of teeth are carried out, the nature of occlusion is determined.

3. If required, perform cytological examination of joint fluid, mehanografiyu, electromyography, arthrography, rheography, artros copy radiography B NHS, tomography, orthopantomography, spiral CT scan in three dimensions

In Parma styling — with a closed mouth — the contours of the joint space are determined, which makes it possible to detect changes in the area of the joint head and joint space. X-ray of the bones of the skull in a direct fronto-nasal projection informs about the position of the articular heads when they are injured . On the ortho pantomogram, the condylar and coronoid processes are determined, but all elements of the joint are not always clearly visible. Therefore, if difficulties arise in the diagnosis of TMJ, the most informative is computed tomography of the joint in three dimensions.

ACUTE ARTHRITIS

The term "arthritis" was suggested by Hippocrates. This is an inflammation of the articular cartilage, capsule and ligamentous apparatus, which may be infectious, traumatic or allergic in origin. Infectious arthritis can occur in children of any age, and traumatic - more often at the age of 3-9 years.

Complaints of children with acute arthritis *(Artritis articulationis temporomandibularis acutae) of* TMJ of various etiologies - for swelling of the tissues and pain in the parotid-chewing region with its irradiation in the ear and back of the head, stiffness of the movements of the lower jaw (the earliest and persistent symptom), inability to eat normally, fever. With rheumatoid arthritis, pain occurs in both TMJs and rheumatoid arthritis in one TMJ and the knee or shoulder joint.

Clinic . Asymmetry of the face may be observed due to swelling of the soft tissues of the parotid region, painful on palpation. Opening the mouth is painful and limited. The range of movements is preserved, but the lower jaw is shifted towards the affected joint, since there is a protective reaction of the masticatory muscles on the affected side.

Rheumatoid arthritis is characterized by a slow increase in pain in the morning and a decrease in the evening, at night during sleep and at rest. The pain is persistent. The formation of rheumatoid nodules on the extensor surface of the forearm near the elbow joint, changes in the heart (rheumatic heart disease) are characteristic.

In the early days of the disease with acute arthritis, an X-ray examination is uninformative, but sometimes a slight expansion of the joint gap due to exudate effusion is detected . With the further development of the inflammatory process, secondary destructive changes appear: partial narrowing of the joint-pop gap, areas of destruction and densification of the head of the condylar process.

One of the main radiological signs of all types of arthritis is periarticular osteoporosis, accompanied by a uniform decrease in the number of bone beams per unit volume of the bone and rarefaction of its structure.

A feature of acute arthritis that occurs in children after a birth injury is their difficult diagnosis. The disease in infants is practically not diagnosed, therefore it is not treated. Unfortunately, in the future it ends with the development of

ankylosis, which is manifested in the child by the gradual reduction of the jaws and difficulties in feeding him. It is with this complaint that the mother of the child goes to the doctor. With traumatic arthritis in the TMJ, hematomas can occur, with pressure on the chin, pain occurs in the injured joint.

The diagnosis of acute traumatic or infectious arthritis is based on complaints (pain in the parotid region radiating to the ear and back of the head, inability to eat properly, painful opening of the mouth, stiff joints and general conditions), objective examination (painful palpation of the soft tissue of the parotid areas limited due to pain, opening the mouth, displacement of the jaw towards the affected joint during its movements), X-ray examination data (at the beginning of the disease - s joint space due to effusion of fluid, and then - a partial restriction).

The diagnosis of rheumatoid arthritis is established based on such signs as morning stiffness of the joint, pain in it, swelling of soft tissues around the joint, damage to other joints, the presence of subcutaneous nodules in the area of bone thickenings, a loose mucinous clot in the study of synovial fluid, a characteristic x-ray picture (marginal "usures" on the lateral areas of the articular surfaces) and the pediatrician's conclusion about the child's rheumatism.

Differential diagnosis of acute TMJ arthritis is carried out with acute mumps, acute lymphadenitis and parotid abscesses, acute otitis media.

Treatment. Depending on the cause of arthritis, treatment includes: restricting the movements of the lower jaw with different types of orthodontic appliances and immobilizing dressings, mechanically sparing diet (liquid beggar), compresses with 5% DMSO solution to the TMJ area, physiotherapeutic procedures - hydrocortisone phonophoresis, Trilon B, DMSO electrophoresis, potassium iodide, lidase; UHF, sollux, paraffin, ozokerite. In addition, non-steroidal anti-inflammatory drugs are prescribed: acetylsalicylic acid, sodium salicylate, salicylamide, butadion, indomethacin, flurenamic and mefenamic acids, brufen, ibuprofen and their analogues, diclofenac, voltaren. If it is impossible to use the above drugs, salicylic acid derivatives are prescribed.

If necessary, the treatment regimen includes antibiotics, sulfonamides, antihistamines, vitamins (groups B and C).

Surgical treatment methods for patients with acute arthritis are not used.

CHRONIC ARTHRITIS

Chronic arthritis *(artritis articulationis temporomandibularis chronica)* develops imperceptibly, over a long time, and is detected more often in the pre- and puberty period (12-15 years).

Primary chronic arthritis in children is rare.

Complaints of the child are usually only about morning stiffness and minor pain IN THE TMJ, aggravated by jaw movements, the appearance of a "crunch" in this case, headache, possible fainting, tinnitus, hearing loss, sometimes DRY mouth or burning in the tongue (which resembles a syndrome Kosten in adults). The appearance of a "crunch" indicates the transition of the inflammatory process into dystrophic.

Clinic. The face is symmetrical. Palpation of the joint and tragus of the ear is somewhat painful. Bimanual palpation through the external auditory meatus reveals friction of the articular surfaces due to their irregularities, which should not be confused with the symptom of clicking in the joint when the meniscus is displaced. With pressure on the chin and the angle of the lower jaw, pain in the joint increases. Exacerbation of the chronic process periodically occurs, then the clinical picture resembles acute arthritis. On the x-ray of the joint, the expansion of the joint gap is determined if the exudative element of inflammation prevails, or uneven narrowing - with the predominance of productive processes. *The diagnosis of* chronic arthritis is based on:

1) characteristic complaints ("crunch" when opening the mouth, morning stiffness and slight pain, aggravated by eating, headache, fainting, tinnitus, hearing loss, sometimes - dry mouth or burning in the tongue, prolonged course of the disease);

2) data from an objective examination: painful palpation of the joint and tragus of the ear, increased pain with pressure on the chin;

3) X-ray examination (uneven expansion or narrowing of the joint space).

Differential diagnosis of chronic TMJ arthritis is carried out with acute arthritis, joint pain dysfunction syndrome, trigeminal neuralgia, deforming osteoarthritis.

For symptoms of TMJ pain dysfunction, the following symptoms are characteristic: unilateral pain in the ear area radiating to other areas of the head, aggravating during the day, especially when eating, pain in the masticatory muscles and limited opening of the mouth or displacement of the lower jaw when opening the mouth to the healthy side. Clinical and radiological changes in TMJ are not observed. The control of the correctness of the diagnosis is the fact that after blockade of the motor branches of the trigeminal nerve near the infratemporal crest according to the Berchet method, muscle spasm is removed and the mobility of the lower jaw improves.

With trigeminal neuralgia, paroxysmal pain is observed, more often in the field of II and III branches. Usually, an attack occurs when the trigger zones are irritated in the area of the wings of the nose, cheeks, chin, lower and upper lips. That is, there is a clear relationship between the occurrence of pain and the irritation of trigger zones.

The treatment of chronic arthritis depends on the cause and the changes that occur in the TMJ.

So, in case of impaired functional occlusion, first the doctor’s actions are aimed at eliminating the factors that cause these disorders. It:

1. Selective grinding of the tubercles of the teeth that increase the bite.

2. The manufacture of mouth guards and plates, apparatuses of functional and mechanical action while reducing the occlusal height.

3. Production of temporary removable dentures, rational prosthetics.

Drug treatment for rheumatoid and rheumatoid arthritis involves the appointment of non-steroidal anti-inflammatory drugs that do not affect the progression of arthritis, but prevent the process of "destruction" of the joint.

Nonsteroidal anti-inflammatory drugs are divided into 3 groups:

- drugs that do not affect the biosynthesis of glycosaminoglycans (GAG) in cartilage (piroxicam, diclofenac, sulindac);

- drugs inhibiting the biosynthesis of GAG (acetylsalicylic acid, indo-metacin, phenoprodin);

- Drugs that stimulate the biosynthesis of GAG (paracetamol, Surgam).

In traumatic arthritis, the use of these drugs is not indicated.

With pain, non-narcotic analgesics are used, and with increased pain - narcotic: tramadol, propoxyphene with acetaminophen.

When a chondrodystrophic process in the joint is detected, chondroprotectors that improve metabolism in the cartilage tissue (traumeel, compositum diskus, etc.) are effective.

Locally, compresses with dimexide and medical bile or with ointments Dolgit, Vipraksol, Voltaren, Ketoprofen, Target T, etc. are applied in the projection of the joint.

If movement in the joint is worsened and pain is aggravated, lidase or hydrocortisone, Kenalog, Depomedrol, arteparone are administered intraarticularly (included in the metabolism of articular cartilage).

Physical procedures are widely used - phonophoresis of hydrocortisone, electrophoresis of potassium iodide, laser therapy, magneto-and interference therapy, piper treatment; paraffin, ozokerite or bischofite applications on the TMJ area.

Arthrosis

Chronic arthritis with a noticeable change in the shape of the joint in the middle of the XIX century. were highlighted as deforming. Later, at the suggestion of R. Virchow, they were called *arthritis d eformans ,* since joint deformation can be the end result of various processes. Deforming arthritis has long been considered infectious, gouty and various kinds of non-inflammatory arthritis.

Currently, deforming arthrosis *(artrosis) is* perceived as a primary chronic joint disease of degenerative origin with primary deformation of the articular cartilage and subsequent reactive degenerative processes of the articular surfaces. In children, arthrosis is more often a continuation of long-term incurable arthritis, and doctors deal with arthrosis-arthrosis . Usually, the pathological process in a child goes along the path of the deforming one, when not only the cartilaginous structures of the articular surfaces are affected in the joint, but also the destruction of the bone tissue of the head of the condylar process occurs, resulting in its deformation. This disease is called deforming osteoarthrosis.

The emerging osteoarthrosis is nothing more than chronic arthritis-arthrosis, which turns into deforming arthrosis (DA), that is, there is no difference between these forms of diseases. The term "secondary" makes sense when the disease began

as arthritis-arthrosis, and then secondary information of the head of the condylar process arose.

Depending on the cause of arthritis, as well as the negative factors that arose (malocclusion, removal of molars, deep bite) and became motivated by the support of dystrophic changes in the joint, secondary rearrangement of the masticatory muscles creates a complex of anatomical and functional prerequisites for the development of signs of secondary chronic arthrosis.

Complaints of children with deforming arthrosis - for limited opening of the mouth, a feeling of inconvenience when moving the jaw, slight asymmetry of the face.

Clinical signs of arthrosis are divided into articular and extraarticular. The vast majority of them are articular - this is limited movement, stiffness and fatigue when eating. After a long load and a period of rest (after sleep, at the beginning of a meal), a "starting pain" occurs. The child sometimes even refuses food, because during eating there is an inconvenience in the joint.

Unilateral increasing microgenia is an extraarticular clinical sign that is well defined radiologically (Fig. 3.26). The transition of arthritis-arthrosis or arthrosis to ankylosis usually does not occur.

X-ray sign of DA are different types of deformations of the predominantly condylar process in the distalium, anterior and medial directions. The occurrence of deformation is due to irritation of the periosteum and the productive phase of excessive bone formation in the direction of least resistance. There is a narrowing of the joint space, a thickening of the cortical layer of the articular head of the lower jaw. Over time, the articular fossa and head become flattened, the articular tubercle decreases, and the neck of the condylar process shortens and thickens (Fig. 3.27 , 3.28).

Differential diagnosis of chronic arthritis-arthrosis is carried out with chronic arthritis, fibrous and bone ankyloses, condylar process tumors, which in children are observed in isolated cases.

Treatment. In chronic arthritis-arthrosis in the initial stage (the absence of significant impairment of joint function and marked condylar deformity), treatment is preferred to physical procedures and the introduction of drugs that prevent scarring and inhibit deformation of the articular head (lidase, kenalog) into the joint.

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PAIN DYSFUNCTION

Aunt pain dysfunction (DB) of the temporomandibular joint is very rare, mainly at the age of 14 years and older.

When biting a lip, tongue, compressing the jaw (bruxism), changing the bite, deformation of the dentition, facial injuries, unrecognized fractures and in improperly repaired fragments of the lower jaw after fractures of its various parts, zygomatic bone, favorable conditions are created for the non-physiological tension of the masticatory muscles and TMJ elements contributing to the development of the database.

Complaints - about a constant, dull, aching headache and pain in the TMJ area, aggravated by emotional stress, movement of the lower jaw with possible radiation to the parietal region and the back of the head, side of the neck, arm, throat; clicking in the joint, hearing loss or " stuffiness" in the ear, lacrimation, photophobia, twitching of muscles under the eye, gnashing of teeth in a dream, clenching of the jaws after sleep and stiffness of the masticatory muscles, burning in the mouth.

Clinic. Asymmetry of the face due to narrowing of the palpebral fissure and a raised angle of the mouth on the affected side. On palpation, painful and spasmodic chewing, temporal, pterygoid, sternocleidomastoid muscles and posterior cervical, snapping and crunching in the TMJ are determined. Opening the mouth may be limited, the lower jaw is shifted to the sore side, making an S- shaped movement; it is impossible to determine the state of physiological rest. In the mouth: tartar deposits on the teeth, enamel fraying, malocclusion (cross, lowering of its height, the Godon-Popov phenomenon).

Differential diagnosis is usually carried out with acute and chronic arthritis, trigeminal neuralgia.

Treatment. Since the database is a symptom complex and the cause of its occurrence is various factors, it is important for the dental surgeon to determine these causes, after which pathogenetic treatment is prescribed.

ANKYLOSIS

Ankylosis *(Ankylosis articulationis temporomandibularis) is* a complete or partial restriction of the mobility of the lower jaw due to changes in the joint, in contrast to contracture. The latter is also characterized by complete or partial immobility of the joint, developing as a result of any non- articular causes (inflammatory processes, injuries, tumors). Distinguish between ankylosis and fibrous bone, the latter in children account for 95 %.

Etiology. According to the Ukrainian center for treating children with diseases of the maxillofacial region, purulent otitis is the cause of ankylosis in 50 % of cases , trauma of the articular process and articular fossa in the fall in 30 %, blows to the chin area and trauma during childbirth; in 20 % - damage to the articular process with osteomyelitis (including hematogenous). The failure of the barrier tissue reactions and the peculiarities of the immunological status of newborns and young children create the conditions for the accumulation of infection and the development of a pathological focus selectively in areas of better blood supply. Such zo hydrochloric active growth, and therefore good blood supply is condylar process.

For the younger children there is a greater likelihood of developing bone ankylosis, that is connected with the anatomical structure in N ES. Acquired fibrous ankylosis is more often observed in adolescence and older.

Unilateral ankylosis

Complaints of children or their parents - about changing the configuration of the face, sometimes - storage in a dream, sharply limited opening of the mouth and

the inability to eat normally. Since parents see their baby every day, they, unfortunately, late notice the limited opening of their mouths and their main complaint is the inability to feed the baby with a spoon. A history of trauma suffered during childbirth or at an older age, otitis media or mumps, and infectious diseases.

Clinic. During the examination, asymmetry of the face is observed due to a decrease in the size of one half of the jaw. From the affected joint, the soft tissues of the cheek are swollen, while on the healthy side they look flat (Fig. 3.29). This is due to the fact that the same volume of soft tissue is distributed on different planes (the area of the affected side is smaller than the healthy side due to a decrease in the height of the branch and the size of the body of the lower jaw). Such a mismatch sometimes leads to diagnostic errors. Cases are described when the surgeon began to operate on a healthy joint. The midline of the chin and the incisor in the lower jaw are always shifted towards the affected joint

Bilateral Ankylosis

Bilateral ankylosis is more often the result of septic disease or birth injury due to unsuccessful application of forceps on the baby's head during childbirth.

Parents' *complaints* - the presence of a child’s deformation of the lower third of the face, the inability to open the mouth, difficulty eating, respiratory failure and snoring in a dream.

Clinic. The child’s face looks like a bird (due to a sharp underdevelopment of the frontal part of its lower third; Fig. 3.35-3.37). The bite is open, distal. Palpation of the mobility of the TMJ heads is not determined. The opening of the mouth is sharply limited (to slit-like). When examining the oral cavity - multiple caries, inflammation of the mucous membrane of the gums, fan-shaped arrangement of teeth of the upper and lower jaws (Fig. 3.38). Radiographically with bilateral bone ankylosis patho Gnom chnym symptom is the partial or complete absence of joint space, presence of bone, which unites in one conglomerate condylar process and the temporal bone. The sizes of the branches and the body of the lower jaw are reduced, bone outgrowths in the form of "spurs" are determined in the region of both angles, the coronoid processes are enlarged.

General changes in the body are the same as with unilateral ankylosis of TMJ, but more pronounced.

Often, due to the septic state, the child may develop ankylosis in other joints, often in the hip. The diagnosis of bilateral ankylosis is made on the basis of the above complaints and symptoms.

Differential diagnosis of bilateral ankylosis should be carried out with secondary deforming arthrosis, contractures of various origins.

Treatment of bone ankylosis of TMJ is only surgical. Surgery is performed under general anesthesia, the intravenous method is often used, due to the limited opening of the mouth and the inability to carry out intubation. In some cases, the lower tracheostomy is preliminarily imposed with further intubation through it

Fundamentals of the surgical treatment of TMJ ankylosis:

1) is carried out immediately after the diagnosis is established, that is, they do not wait until the child grows up; in children, it is necessary to restore joint function as soon as possible;

2) the somatic development of the child depends on a normal diet, so first the child needs to provide the conditions for this, that is, open his mouth;

3) the only way to open your mouth is arthroplasty, the essence of which is to perform an osteotomy. The latter should be done:

a) as far as possible (closer to the former joint);

b) osteotomized fragments must be diluted with the apparatus (Fig. 3.40) or isolated from one another by biologically compatible materials - the dura mater

4) the solution of the one-stage elimination of ankylosis and microgenia depends on the age of the child and his somatic state.

In historical terms, all methods of surgical treatment of ankylosis are divided into 3 groups:

1. Interventions, the purpose of which is to restore the movements of the lower jaw by forming a “false” joint in the area of the affected branch (different types of high osteotomy or transplantation of the metatarsophalangeal joint). Klapp also proposed resection of a part of the lower jaw branch, followed by free transplantation of the fourth metatarsal bone (metatarsale IV). However, the author further refused this operation due to such shortcomings as:

- additional trauma associated with the graft;
- a possible violation of the further growth of the donor bone;
- weakening of the musculoskeletal function of the foot;
- over time - the development of destructive changes in transplanted cartilage and bone elements of the joint;
- the transplanted metatarsal graft does not have sufficient growth potential;
- the divergence of the functions of the metatarsophalangeal joint and TMJ.

2. Techniques that, together with the restoration of the movements of the lower jaw, eliminate unilateral microgenia.

3. Techniques that at the first stage lengthen the body of the lower jaw, and then restore its mobility. They are unacceptable for children, because they do not meet the main rule of surgery: first, the restoration of function (all the more so), and then everything else. For a child who is unable to eat, the main thing is to open his mouth and restore the mobility of the lower jaw, and, accordingly, normal nutrition.

In recent years, the technique of distraction osteosynthesis (jaw lengthening) has been used to eliminate microgenia, which is based on the principle of G. Elizarov. According to this technique, an osteotomy of the jaw branch is carried out with its subsequent stretching to 1.5-2 cm using an apparatus that is applied extra- or intraorally. In the future, the child needs a retention device for 1.5 years.

Patients after TMJ arthroplasty require prescribing medication (osteotropic antibiotics, non-narcotic analgesics, vitamins, immunostimulants), mechanotherapy (active and passive; Fig. 3.42), massage. The last appointments should be performed both in the early and in the late postoperative period (for 2-3 months).

Complications They can occur before the operation, during it and in the postoperative period.

The impossibility of a normal examination of the child and a violation of the somatic state can delay the timing of the intervention.

During anesthesia, difficulties may arise for the anesthesiologist, namely, the impossibility of intubation through the nose and mouth, due to the pathological development of the respiratory tract and the inability to open the mouth.

At the stage of condylar osteotomy, a common complication is damage to the maxillary artery located near the inner surface of the head of the condylar process of the lower jaw.

After surgery, the child may experience vomiting as a complication after anesthesia, therefore, the position on the back should be avoided , since there is a threat of aspiration asphyxiation.

If active and passive mechanotherapy is not performed in the postoperative period , the operation may lose its meaning, since relapse of the disease occurs due to fusion of osteotomized wound surfaces.

Treatment of patients with ankylosis in the postoperative period should be carried out by a surgeon and an orthodontist, whose efforts are aimed at eliminating:

- fan-shaped arrangement of teeth;
- displacement of the central line of the lower jaw towards the affected joint;
- pathological bite;
- microgenias, etc.

Clinical lesson №3

Mavzu: TMJ diseases in children. Classification , etiology, diagnosis. Surgical treatments.

T echnology cal model of the formation

Lesson time: 3 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Anatomy of the TMJ. Structural features of TMJ in children. 2. Diseases of TMJ in children . Etiology, clinical manifestations. Diagnostics, differential diagnostics. Methods of surgical treatment. 3. Assistance in anatomical and functional disorders.
The objective of the training session:	Learn to diagnose children with TMJ diseases . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice

	on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

Practical lesson number 4

Subject: Neoplasms of the dentition in children. Classification. General principles of diagnosis and treatment. Oncological alertness. Benign tumors of the organs of the oral cavity (papilloma, fibroma, lipoma, rhabdomyoma, myoblastoma). Tumor-like formations of the soft tissues of the face and organs of the oral cavity (papillomatosis, gum fibromatosis).

T echnology cal model of the formation

Lesson time : 2 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	To study the etiology, pathogenesis , clinic, diagnosis and treatment of children and adolescents with tumors of the dentition .
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical material, projector , computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature :	Record a subject and listen

	1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions
3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive method

Using the “HANDLE IN THE MIDDLE OF THE TABLE” method

Test questions from related disciplines:

1. Anatomical and physiological features of the maxillofacial region in children.
2. Topographic anatomy of the face and neck.
3. General clinical and histological characteristics of benign soft tissue tumors.
4. Methods of radiation diagnosis in the maxillofacial region.
5. Tumors of soft tissues of the maxillofacial region in adults and methods of their treatment.

Test questions on the topic of the lesson:

1. Classification of benign tumors of the soft tissues of the maxillofacial region in children.
2. Tumors of soft tissues of the maxillofacial region of ectodermal nature (papilloma, nevus, epitheloma, atheroma, etc.). Clinic, diagnosis and treatment.
3. Tumors of soft tissues of the maxillofacial region of mesoderm nature (fibroma, myoma, lipoma, gum fibromatosis, neurofibroma, etc.). Clinic, diagnosis and treatment.

4. Vascular tumors of the maxillofacial region in children. Hemangiomas. Classification, clinic, diagnosis and treatment of hemangiomas of the face in children, depending on the nosology.
5. Lymphangiomas of the maxillofacial region and neck in children. Classification, clinic, diagnosis and treatment.
6. Clinical examination of children with benign tumors of the soft tissues of the maxillofacial region.

Practice Text

The maxillofacial region is the *real Eldorado for the development of tumors, since all three germ layers participate in the formation of its tissues* .

TUMOR GENERAL

The tumor is characterized by pathological proliferation of cells in which mitosis is not controlled and the phenomena of biological atypism develop. Pato physiological signs of tumor growth:

- reproduction atypism - characterized by mitosis, which is not regulated , by the loss of its upper limit;
- metabolic and energy atypism (the synthesis of oncoproteins, a change in the way energy is generated);
- physico-chemical atypism (an increase in water in tumor cells and a decrease in Ca^{++} ions ; an increase in water facilitates the diffusion of substrates necessary for metabolism, and a decrease in calcium reduces intercellular adhesion);
- atypism antigenic (simplification of antigenic composition);
- morphological atypism (tissue and cell);
- functional atypism.

The oral cavity in connection with the participation in the formation of its tissues of all three germ layers and mesenchyme is a nutrient medium for tumors. That is why they are extremely diverse.

It should be noted that clinicians very often form the final diagnosis only on the basis of the conclusion of the pathomorphologist. At the same time, the microscopic structure does not always determine the future biological "behavior" of the tumor. For example, some morphological signs of a malignant tumor are not strictly specific and can be determined during inflammatory, dysplastic , dystrophic, and other processes during the functional reorganization of an organ or its part. This thesis primarily relates to the tissues of the child's body , where the processes of restructuring and development take place constantly, continuously.

The absence of a clear correlation between the clinical course and the microscopic structure of the tumor, the inability to reliably determine the boundary between benign and malignant tumors led to the isolation of a group of so-called intermediate, or semi-malignant, tumors.

In the systematization of tumors of the maxillofacial region in children according to the histological principle, difficulties also arise, since there are groups of conflicting genesis.

Therefore, M.F. Glazunov, M.O. Kraevsky, I.V. Davydovsky, O.I. Paches believes that it is impossible to classify tumors based on any one symptom . It is more expedient to divide them according to this principle: benign - malignant (the latter will be considered in a separate section); epithelial - connective tissue; organ-specific — non - organ- specific; true - tumor-like formations; congenital - acquired . You can also divide them by location, that is, by anatomical and topographic features.

A classification of tumors of the soft tissues of the maxillofacial Oblas ti v children, which is often used in clinical practice (Table 3.1.).

Any division of tumors is important primarily because different treatments will be used depending on this. A striking example of this situation is the difference in the treatment of benign and malignant tumors.

The most important and characteristic group of tumors that develop in children are congenital, that is, those with which the baby is born, or those that appear in the first months and years of life.

The rapid growth of such tumors leads to a significant increase in their size; due to the pressure of the tumor tissue, atrophy or deformation of nearby tissues occurs , which negatively affects the growth and development of the latter (Fig. 104). The localization of tumors in the area of vital organs can significantly complicate breathing, swallowing, chewing, opening the mouth and other functions, which can lead to undesirable consequences (Fig. 105, 106).

For **congenital tumors** are primarily vascular (hemangioma, lymphangioma) and tumor dizontogeneticheskie origin who fuss cabins due to violations of the genetic programs of intracellular division.

the cloth	**True tumors**		**Tumor-like neoplasms**
	Benign	**Malignant**	
Connecting: - *fibrous* - *fat* - *muscle* - *blood vessels* - *lymphatic vessels* - *peripheral nerve tissue*	Fibroma (soft, hard). Skin horn. Myxoma	Fibrosarcoma	Gum fibromatosis. Banal epulid. Teratoma
	Lipoma	Liposarcoma	Lipomatosis
	Leiomyoma Rabdomioma	Leyosarkoma Rhabdomyosarcoma	
	Hemangioma	Angiosarcoma Endotheliom a	Systemic angiopathy Randloux-Osler-Weber, Strange-Weber disease and others.
	Lymphangioma	Malignant lymphosarcoma	
	Neurofibroma Neurol	Malignant neurinoma	Neurofibromat

	eoma	(schwannoma)	osis Nevus
Epithelial: *mucous membrane*	-	Crayfish	Papilloma

Table 3.1. *Classification of soft tissue tumors in children*

Papilloma *(Pa pilloma ;* from lat. *Papilla* - nipple) - a benign tumor formation, develops from a multilayer epithelium. More often observed in girls 7-12 years old.

Complaints - the presence of a slowly growing painless tumor on the leg. *Clinic.* Papilloma is localized on the mucous membrane of the cheeks, alveolar process, rarely on the lower and upper lip, tongue (Fig. 3.43), sometimes in the area of the corner of the mouth, hard and soft palate. The tumor often has a narrow stalk, a rounded shape. The mucous membrane above the papilloma is not changed in color, but has a rough surface, the epithelium above it keratinizes. The consistency of the tumor is soft elastic.

The papilloma with fibroma, neurofibroma, and retinal cyst of the small salivary glands is *differentiated* , with localization on the alveolar process , with the gingival cyst ("Serra gland").

Fibroma (*fibroma ;* from Lat. *Fibra* - fiber) is a tumor from mature fibrous connective tissue. It is localized mainly in the mouth - in the tongue , (Fig. 3.44), the alveolar process. It is observed in children 7-15 years old, quite rarely - in infancy (the so-called congenital fibroma; Fig. 3.45).

Complaints of the child or his parents - the presence of a painless, slowly growing tumor in the oral cavity.

Clinic. The tumor is most often located on the alveolar ridge, has a raft with a consistency, a rounded shape, a wide base, limited from surrounding tissues. It grows very slowly. The epithelium of the mucous membrane above the tumor is not keratinized, therefore its surface is smooth and pink, in contrast to the papilloma. Fibroma is painless, displaced along with the mucous membrane. In infants, when located on the alveolar ridge, fibroma is differentiated from myoblastoma.

Treatment is the surgical removal of a tumor within healthy tissues under local or general anesthesia.

Lipoma is a benign tumor of mature adipose tissue. It is localized where there is adipose tissue: in the subcutaneous tissue or in the submucosal layer. The education is soft, painless, with clear boundaries. The tumor grows slowly. Surgical treatment of lipomas - removal of the formation together with the capsule followed by histological examination.

Rhabdomyoma *(rhabdomyoma ; synonym* : myoblastoma oma, Abrikosov's tumor, granular cell rhabdomyoma). In the oral cavity, rhabdomyoma is localized mainly on the root and back of the tongue, the muscles of the pharynx and soft palate; in newborns, it is observed on the alveolar process. In children, it is more common at a young age.

Parents' *complaints* - the child has a slowly growing, painless neoplasm.

Clinic. Rhabdomyoma has a dense consistency, delimited from surrounding tissues, is often encapsulated, small in size, and painless.

Rhabdomyoma should be *differentiated* with fibroma, lipoma, or mfangioma.

Treatment - surgical removal of the tumor boundaries zd Hur tissue to Thoroe performed only in chelyu stno-facial hospital under about soup m anesthesia with preliminary nym needling language for hemostasis in the tumor therein. A section of a tumor of pink-yellow or yellow- gray color has a homogeneous or lobed fibrous structure.

Myoma - from myoblasts (myoblastomyoma) or Abrikosov's tumor - a benign dysontogenetic tumor from immature muscle tissue (myoblasts). It is often found in newborns and infants and is localized on the tongue, alveolar process, etc. The cherry-colored tumor has a rounded shape, dense, painless on palpation, in some cases on a thin leg.

The treatment is surgical, i.e. earlier excision of the tumor within healthy tissues, regardless of the age of the child. May relapse.

Multiple papillomatous growths - **papillomatosis** - are often found on the oral mucosa . They can occur as a result of chronic trauma, chronic inflammation, and can be true tumors. Chronic trauma is most often caused by prosthetics or prolonged orthodontic treatment, smoking, etc. Papillomatoses of a tumorous nature are less common and are localized most often on the cheeks. In some cases, papillomatosis can be caused by viruses, as evidenced by the presence of vulgar warts on the skin.

The treatment of papillomatosis depends on the causes of its occurrence. Sometimes it is enough to eliminate the traumatic factors. In some cases, cryodestruction is used. It is possible to use antiviral ointments (5% tebro phenic) for 30-40 days, followed by removal or cryodestruction of the remaining papillomas.

Fibromatosis is also a good quality neoplasm , the source of growth of which is connective tissue. Refers to genetically determined pathology . It is characterized by slow growth and the appearance of dense, without painful, tuberous growths located along the alveolar process.

Gum fibromatosis is a rare disease, manifested by diffuse fibromatous growths of dense consistency, capturing the entire or partially alveolar process of the upper or lower jaw, and sometimes both jaws. Gum fibromatosis, some authors attribute to chronic inflammatory processes, others consider it a true neoplasm, indicate its family-hereditary nature. The causes of gingival hyperplasia can be medication, endocrine disorders. In children, gum fibromatosis occurs at the age of 7-12 and 12-16 years old, as a rule, in girls. Two forms are clinically distinguished: local, when the lesion is noted at the level of several teeth, and diffuse, when the growths capture the entire part of the alveolar process of the upper and lower jaws. The process is localized in the gingival papillae and extends to the alveolar process. Crowns of teeth can be hidden by growths up to their incisal edge. On palpation, fibromatous growths are dense, motionless, painless. Radiologically, destructive changes in the alveolar process can be detected. Gist ologicheski

determined collagen new fiber with single cell structures. Diagnosis of fibromatosis is not difficult, but sometimes it is necessary to differentiate it from hyperplastic gingivitis.

Surgical treatment - excision of growths along with the periosteum (to avoid relapse). The bone is closed with an iodine swab. With a local form of growth, they are excised simultaneously, with a diffuse one, in several stages. With destruction of bone tissue, treatment of foci of lesion with milling cutter and coagulation are required.

Clinical lesson №4

Neoplasms of the dentition in children. Classification. General principles of diagnosis and treatment. Oncological alertness. Benign tumors of the organs of the oral cavity (papilloma, fibroma, lipoma, rhabdomyoma, myoblastoma). Tumor-like formations of the soft tissues of the face and organs of the oral cavity (papillomatosis, gum fibromatosis).

T echnology cal model of the formation

Lesson time: 2 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Classification Ia tumors dentition in children . 2. General principles of diagnosis and treatment. 3. Oncological alertness. 4. Benign tumors of the organs of the oral cavity (papilloma, fibroma, lipoma, rhabdomyoma, myoblastoma). 5. Tumor-like formations of soft tissues of the face and organs of the oral cavity (papillomatosis, gum fibromatosis).
The objective of the training session:	Learn to diagnose children with tumors of the dentition . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves

Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

Practical lesson number 5

Subject: Pyogenic granuloma, giant cell epulis, dermoid cyst. Benign tumors of the soft tissues of the face. Hemangioma, lymphagioma.

T echnology cal model of the formation

Lesson time : 3 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic
The objective of the training session	To study the disease I : pyogenic granuloma, giant cell epulis, dermis oidnaya cyst. Benign soft tissue tumors of the face, hemangioma, lymphagioma.
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical material, projector , computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ;	Divided into small groups , watching , participating , listening. Student expresses his

	2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	opinion complements and asks questions
3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive Method :

Using the "GALLERY TOUR" method

For work it is necessary:

1. a set of questions and situational tasks printed on separate sheets.
2. clean sheets of paper.
3. pens with colored rods (blue, red, black).
4. draws for the draw, according to the number of students in the group.

Test questions on the topic of the lesson:

1. The clinical picture of pyogenic second granuloma.
2. Treatment of giant cell epulis a.
3. Etiology of dermoid cysts. Cystectomy
4. Types of hemangiomas. The methods of their treatment.
5. Vidiy and clinical picture limfagiom Chloe. Treatment methods.

Practice Text

Pyogenic granuloma, or Ponce Dore tumor. Synonyms: botriomycoma, hieroplastic hemangioma, teleangiectatic granuloma.

Complaints of parents or a child about the presence of a painless neoplasm (Fig. 3.46.), Which appeared after an injury to the corresponding area, quickly grows and bleeds when touched.

Clinic. In the early stages of development, the tumor has a smooth surface of bright red color, bleeds easily with minimal trauma, turns pale with pressure, can ulcerate and necrotic with the release of purulent-bloody secretions. It is localized mainly on the cheeks, lips, and the mucous membrane of the oral cavity (Fig. 3.46.).

Pyogenic granulomas are considered as a benign neoplasm of the group of hemangiomas that occurs due to trauma.

From a pathophysiological point of view, it is difficult to attribute it to hemangiomas, since the formation is represented by granulation tissue with a large

number of dilated capillaries. Perhaps that is why clinicians attributed pyogenic granuloma to hemangiomas.

Pyogenic granuloma (Fig. 3 . 47) - formation resulting from mucosal injury lips, cheeks, tongue. It is formed from connective tissue, skin or mucous membrane. Often, pyogenic granuloma is difficult to differentiate from true hemangioma, therefore, some authors propose to consider them as a kind of vascular tumors. In the WHO classification, it refers to tumor-like formations. Pyogenic granuloma is included in the group of rare neoplasms (2.7% of tumor-like ones). It is observed at the age of 7-12 years and at 12-16 years, more often in boys. The occurrence of pyogenic granuloma, as a rule, is preceded by trauma.

Clinically, pyogenic granuloma is a rapidly increasing (sometimes within a few days) formation with a diameter of up to 1-2 cm, round or irregular in shape, on a broad base, dark red in color, sometimes with surface necrosis, easily bleeding at the slightest touch, painless when palpation. In appearance, pyogenic granuloma resembles granulation tissue with rich blood supply. Differentiate pyogenic granuloma from hemangiomas, retention cysts, most often formed after trauma, angioepithelioma, melanoblastoma.

Surgical treatment. Some authors believe that with the elimination of the traumatic beginning, pyogenic granuloma can decrease in size or regress.

Giant cell epulis is a formation of round, oval or irregular shape, soft or elastic-elastic consistency, cyanotic-purple in color, sometimes with a pronounced brown shade, with a smooth or slightly bumpy surface, painless on palpation, moderately bleeding during trauma, has rapid growth, with a diameter of 0.5 to 3 cm. Epulises are located only in the area of permanent teeth, more often occur in girls 12-16 years old. Foci of osteoporosis, spreading from the surface in depth , are determined on an x-ray gram . The borders of the lesions are fuzzy, blurry, and there is no periosteal reaction.

Epulises are differentiated from tumors located on the alveolar process; fibrous epulis - from fibromas, angiomatous and giant cell - from hemangiomas, as well as from hypertrophic gingivitis when it is localized in the area of certain groups of teeth and arising from chronic irritation in response to overload, trauma, chronic inflammation, as well as from blood diseases, hormonal changes in functions organism.

Surgical treatment - excision within healthy tissue to the bone. In destructive changes in the underlying bone - meticulous noe excision to visible zdoro in the second bone. The wound surface is covered with an iodine swab. If the operation is not thorough enough, relapse is possible.

Congenital cysts are divided into formations, which are a malformation of the ectoderm (dermoid and epidermoid cysts of the maxillofacial region) and the gill

apparatus and its derivatives (median and lateral cysts of the neck, parotid cysts, tongue root).

Dermoid and epidermoid cysts

They develop in the area of embryonic crevices, furrows and folds of the ectoderm from its dystopian elements during the period of embryonic development and are always localized closer to the middle, in the projection of gill arches. More often (47%) it is the bottom of the oral cavity, the neck, submandibular and pernorbital, the nasal region and the wings of the nose. Dermoids and epidermoids can be both in young children and in children 10-12 years old.

Complaints The child does not complain, only if a deformation of the face occurs, the patient or his parents pay attention to it.

Clinic. The characteristic localization of these formations and clinical signs help to determine the diagnosis: the tumor has a rounded shape, a smooth surface, dense, painless, slowly grows, reaches large sizes rarely, only when localized in the bottom of the oral cavity, sometimes suppurates. The skin over the formation is not changed, it is freely taken in a crease.

It is difficult to clinically distinguish a dermoid from an epidermoid. Only histologically determine that the membrane of the dermoid cyst consists of three layers of the skin and its derivatives (sebaceous, sweat glands, hair), and the membrane of the epidermoid cysts is made of the epidermis and does not contain skin derivatives. The contents of the dermoid cyst (products of the activity of the sebaceous and sweat glands) has a mushy consistency, gray in color, with an unpleasant odor. Epidermoid cysts contain an odorless, lard-like mass. A puncture to confirm the diagnosis is not shown, since it is impossible to get a puncture due to the thick consistency of the contents.

Differential diagnosis. Dermoids and epidermoids differentiate with median and lateral cysts of the neck, atheromas, tumors of the parotid gland, malignant tumors of the reticulo-endothelial system (lympho- and reticulosarcoma), cerebral hernias (a bone defect is detected on the X-ray of the bones of the face - a hernia gate confirming the diagnosis of the brain) , pa metastases Single lymph nodes, hitting niyami imfaticheskih nodes in tuberculosis and sarcoidosis. And dermoid epider moidn s cysts with suppuration should be differentiated from acute or obos trivshimsya chronic lymphadenitis, festering atheroma.

Surgical *treatment of* cysts — removal of the vm naturally with the membrane. When localization tion in the brow area of skin incision is made parallel to the eyebrows on the nose - the natural folds. When you remove a cyst located in the lane sections, there is an intimate connection between them and the periosteum, and bones have I appearance of the tumor. Therefore, the removal of the cyst membrane in this area should be carried out carefully so as not to damage it. Dermoids and epidermoids localized in the bottom of the oral cavity (in the upper floor) are usually located closer to the mucous membrane under the tongue, therefore, in such cases, only the mucous membrane and submucous layer of the frenum of the tongue are opened. The assistant displaces the tumor from the skin

side in the submental area upward, in the direction to the oral cavity, after which the surgeon removes it along with the membrane

HEMANGIOMES

Hemangiomas are dysembryoplastic tumors that develop until complete differentiation in the structure of their cells is complete. A.I. Aprikosov believed that hemangioma is a tumor from blood vessels.

There are many reasons and evidence in favor of hemangioma as a tumor-like formation, namely:

1. Hemangiomas in 90% of cases are associated with malformations.
2. In the pathogenesis of hemangiomas, there are elements of signs of tumor-like growth.
3. Infiltrative growth is not characteristic of true tumors. Hemangioma is the only neoplasm among vascular tumors with infiltrative growth, relapse, but is not able to metastasize. The location of hemangiomas near the fissures of the fetus, where the formation of natural openings of the facial skeleton takes place and tissue growth is particularly intense, is evidence of their embryogenetic origin. It is in these places that malformations, dysplasia, and excess tissue elements easily arise. It is known that among vascular neoplasms there are not only true tumors (mainly capillary hemangiomas), but also focal dysembryoplasias. In most cases, they are intermediate between malformations and tumors.

Neoplasms from the elements of the vascular wall are one of the most controversial and unresolved issues of oncomorphology due to the high variability of tumors, a fuzzy idea of the source of growth, etc.

In the embryonic period, the development of microvessels occurs due to the mechanisms of primary and secondary angiogenesis. In the occurrence of vascular tumors, dysembryoplasia is of great importance when, against the background of physiological angiogenesis, the cleaved angioblast elements begin to proliferate during the embryonic period or after the birth of the baby.

In accordance with the available classifications, the maxillofacial hemangiomas are divided as follows:

1. By origin: congenital (95-96%) and acquired, which most often occur after traumatic injuries of soft tissues.
2. The depth of the location: surface and deep (non-deforming tissue).
3. At the location: in soft tissues and bones (maxillary hemangiomas).
4. By structure: capillary, or simple; cavernous or cavernous; clustered, or branched; mixed.
5. In the vessels from which hemangiomas originate: arterial, venous, arteriovenous .

In children, hemangiomas grow most actively during the 1st year of life. Sometimes (only capillary) can undergo reverse development (this is the only tumor that in 60-70% of cases can disappear on its own). On the surface of

hemangiomas, occupying large areas of the face, areas of tissue necrosis may appear (Fig. 3.57.).

Pathognomonic symptoms of superficial hemangiomas are: bright red with a bluish tint skin color; symptom of filling-desolation, which is manifested by the disappearance or decline of the tumor when pressure is applied to its surface with a finger and its appearance after the cessation of pressure; an increase in tissue temperature in the hemangioma region compared with a symmetric site; protrusion of the tumor over the relief of the skin or mucous membrane (except capillary).

Deep hemangiomas are located in the soft tissues and bones of the jaws. Unlike superficial, they do not give external deformation of the face. The only sign of such hemangiomas may be a pronounced vascular pattern of the skin or mucous membrane of the alveolar process over the site of the tumor. The most informative diagnostic criterion is puncture, in which there is free filling of the syringe with blood. In some cases, blood is also obtained with lymphangioma, but, unlike hemangiomas, the liquid will be brown. To establish a diagnosis using thermovisiography, ultrasound, radiography (with intraosseous hemangiomas), computed tomography, MRI. Sometimes, when studying the zone of location of hemangiomas in the cavities, phlebolitis is detected. Phleboliths ("venous stones") are round-shaped whitish formations up to 1 cm in diameter, relatively often radiopaque

Capillary hemangiomas (simple)

Among all hemangiomas of the maxillofacial region in children, capillary constitute about 15 %. Perhaps the real number is greater, but due to the fact that such hemangiomas do not cause fear in parents, since they hardly grow, and pain or other sensations in children are often located in the occipital region and on the neck, parents usually go to the doctor late .

Complaints With capillary hemangioma, parents complain only of the presence of a red spot, which quickly or slowly increases or does not increase, but never rises above the surface of the skin.

Clinic. Most often they are located on the cheeks, neck, nape, temple, less often - on other areas of the face. In appearance it is an intense pink or red-cyanotic color flat spot with clear boundaries (Fig. 3.59.). When pressed, it sharply turns pale, and after the cessation of pressure acquires a primary color. Capillary hemangioma affects the skin and, less commonly, the mucous membrane of the oral cavity.

Quite often, capillary hemangiomas such as a wine stain covering large areas are observed. The skin area in such cases has the appearance of a spot saturated with blood, from red to cyanotic color (Fig. 3.60.). Some doctors attribute such hemangiomas to hemangiomatous nevi and capillary angio dysplasias.

Simple hemangiomas are the only form of a vascular tumor that can independently reduce itself. If at 2 3 examinations of the child for 3-9 months, the tumor does not increase, and the color becomes less intense, these are signs of its reverse development. All other forms of hemangiomas do not disappear on their own, but, on the contrary, tend to progress.

Cavernous hemangiomas

Cavernous hemangiomas are hemangiomas, which are one or more cavities filled with blood. In their pure form, they are rarely observed (about 10%), more often they accompany mixed forms of the tumor.

Complaints about the presence of rapidly increasing facial deformities. Parents note that with crying or tilting the child's head, the size of the tumor increases.

Clinic. Cavernous hemangiomas of the face, especially of considerable size, disfigure it, cause deformation of the organs of the oral cavity, underlying tissues (Fig. 3.61.). Localized on the tongue, lip, cheek, parotid regions, the tumor causes not only deformation, but also functional disorders in the form of impaired chewing, closing lips, jaw movements, etc. With trauma to the formation, significant bleeding occurs, inflammation can develop. Characteristic is a symptom of filling-desolation. The skin above the superficially located cavernous hemangioma of red or cyanotic color, and with its deep localization may not change. Strengthening the vascular pattern of the skin over the tumor is an important symptom of deep cavernous hemangiomas. The deformation of the corresponding region may be insignificant. A frequent sign of cavernous hemangioma are areas of a mixed form of hemangioma on the surface of the skin above the cavernoma (usually in the parotid region). With venous cavernous hemangiomas, palpation is thicker in their thickness, but phlebolitis, which usually appears after 10 years of age, can be detected. Phleboliths are more often formed with hemangiomas of the cheek and temporal region. Puncture can confirm the diagnosis if the blood received fills the syringe freely. Teploviziografiya, thermometry, rheography help distinguish deeply located hemangiomas from other tumors by the presence of "the mountains I whose" area.

Intraosseous hemangiomas

Complaints Parents or children in most cases are rarely worried about the presence of jaw deformation, increased bleeding from the tooth during treatment of periodontitis, and bleeding of the gums when brushing your teeth on the affected side.

Clinic. Intraosseous hemangiomas are extremely rare, but usually have a mixed prognosis. Observed in interchangeable and permanent bites. Clinical symptoms are extremely poor. The face with bone hemangioma is usually symmetrical. Deformation of the alveolar ridge can be observed (Fig. 3.70.). The location of such hemangiomas is mainly the body and the branch of the lower jaw. Microsigns of such a hemangioma are areas of hyperemia of a non-inflammatory nature of the mucous membrane that is injured when brushing your teeth, and hypertrophy of the interdental papillae. Intraosseous hemangiomas can also be detected when the tooth is removed, when the child begins significant bleeding. The latter should be stopped by first temporarily inserting a finger into the hole, and then returning the tooth back to the hole, or a mouthguard made of stens made *ex tempore* . Such hemangiomas can be accidentally detected during tooth removal. At the same time, bleeding is stopped by filling the canal with the appropriate material or a gutta-percha pin, and then the child is referred

for examination and treatment to a dentist surgeon. Bone hemangioma can become an X-ray “find” during an X-ray examination for another reason. The x-ray shows a focus of unevenly altered bone tissue that has retained a large-loop structure. The foci have clear contours, some are blurred, which resembles the X-ray picture of fibrotic dysplasia (Fig. 3.71., 3.72 .).

Hemangioma Treatment

The most important points in the treatment of growing hemangiomas are the earliest possible diagnosis and early treatment of the tumor. This leads to the choice of an appropriate method to prevent many failures associated with further treatment, and its negative consequences.

Methods of treating hemangiomas are extremely diverse and depend on their shape, size and location, growth rate, as well as the age and physical condition of the child, the qualifications of a doctor, etc.

Sclerosing therapy involves exposure to the walls of the tumor of a variety of cytoplasmic poisons, which are the cause of aseptic tissue necrosis, subsequent scarring and the disappearance of hemangiomas. Of the sclerosing substances, acids (trichloroacetic acid with a 2% solution of lidocaine in a ratio of 5: 1), alcohols, prednisolone, calcium chloride are most often used. For the same purpose, factors of different temperatures are used (high - hyperthermia of sludge and low - hypothermia; diathermo coagulation). Advantages of the sclerosing method of treatment: ease of use, the ability to perform in an outpatient setting , the absence of significant bleeding, the possibility of re-intervention (Fig. 3.73. , 3.74.).

One of the biggest drawbacks of tumor sclerotherapy with alcohols, various acids, and cryodestruction is the impossibility of real dosing of necrosis (in depth and area). It is difficult for a doctor to determine the optimal concentration of a substance and the duration of its action on tissues with the goal of dosed tumor necrosis. If they are insufficient, the intervention will need to be repeated several times. With an overdose of the action of the sclerosing agent, the necrosis will be greater than necessary (Fig. 3.75.). Therefore, this type of treatment is preferably used for small hemangiomas, under other conditions, the operation should be done by an experienced specialist. When using acids or alcoholic solutions, if the lesion is not sufficiently isolated, it may get into the vascular bed or burn near the tumor of the skin or mucous membrane.

Quite often the treatment of hemangiomas maxillofacial used hormone therapy (greater ca Stu prednisolone). However, there is no clear idea of the indications and contraindications for using this treatment method, since they are determined by the location and type of hemangioma, its depth and relationship with the neurovascular bundle, eye, salivary gland, etc. Of course, when prescribing large doses of hormones, doctors do not take into account the background diseases of the child, and the long-term results of treating hemangiomas in this way cannot always be predicted both from the point of view of local changes and the effect of hormone therapy on other organs and systems of the growing organism.

The negative consequences of prolonged corticosteroid therapy of hemangiomas in children include: hypertensive syndrome; peptic ulcer of the stomach: hepatic-renal failure; drug dependence.

A somewhat better result is obtained with the local use of small doses of prednisone for sclerotherapy of capillary hemangiomas of the red border of the lips and eyelids.

For the treatment of cavernous hemangiomas in children, a 70 % alcohol solution is often used , which is injected into the tumor in two ways according to Yu.I. Vernadsky:

1. Aspiration and injection. Hemangiomas are isolated from nearby healthy tissues (with Yaroshenko's clamp or tongue holder - for small tumors; if it is not possible to clamp, the tumor is flashed with silk according to Krogius), blood is sucked out of it with a syringe, then the same amount of 70% alcohol solution is injected for several minutes , after which is aspirated from the cavity, and a tight bandage is applied to the treated area of the tumor.

The diathermocoagulation method is widely used for the treatment of capillary and mixed forms of hemangiomas, both independently and in combination with surgery (Fig. 3.76., 3.77.).

The surgical method involves the complete or partial (possibly phased) removal of the tumor. This method can be used to complete sclerotherapy (excision of rough scars) (Fig. 3.78., 3.79.). But most often it is independent (Fig. 3.80 . - 3.90 .). Applying this method to treat young children with significant cavernous and mixed hemangiomas of the face and neck, the following should be considered:

1. Prior to surgery for poor blood counts provide transfusion of it or plasma; with thymomegaly, they carry out the appropriate prednisone preparation, in case of malnutrition they provide a full-fledged quality and sufficient quantity food. Prescribe vitamins, immunomodulators, etc. The foci of a "dormant" infection are detected, which, under the influence of an operating injury, can become a source of somatic complications.

2 . Intervention should be carried out under anesthesia, in the shortest possible time, in the least traumatic way, with minimal blood loss. This will ensure the prevention of DIC (disseminated intravascular coagulation)

3 . Often, the first stage of operation is smiling external carotid ligation ap ter ii. With the localization of hemangiomas in around the ear area may be damaged or is, the branches of the facial nerve, as parents warn in advance.

The method of embolization of the leading vessels of the hemangioma. The essence of the method is the introduction of bioinert material into the lumen of the adducting vessel in order to obstruct it. Such an intervention is carried out in the conditions of the center of endovascular neuroradiography of the Academy of Medical Sciences of Ukraine. First, angiography of the head and neck is performed, the location scheme of the adducting vessels is analyzed. Then, under the control of the X-ray monitor, an embolizing material is introduced through the catheter, which should be biocompatible, radiopaque, non-adhesive

and have a low viscosity - pass through a catheter with a diameter of 0.5 mm. After such an intervention, after a while, the second stage of treatment is performed - the surgical removal of hemangiomas on bloodless tissue in the maxillofacial department. The first analysis of the experience of such interventions suggests their effectiveness. The bowl method is used to treat large cavernous forms of hemangiomas.

X-ray therapy method. It is carried out in young children with significant sizes of rapidly increasing hemangiomas when surgical intervention is not possible at the moment. Doses and number of radiation sessions are prescribed by an X-ray radiologist. Often, a correctly selected regimen for hemangioma irradiation inhibits its growth, stabilizes its size. And after 6-8 months it allows you to remove the tumor surgically.

Soft X-rays (the so-called "bukki") are prescribed for older children for the treatment of sclerotherapy-resistant forms of capillary hemangiomas, for example, "wine stains."

The method of selective photothermolysis involves laser evaporation of the tumor, requires expensive equipment and multi-session treatment. However, it has several advantages, first of all, non-invasiveness and painlessness. The method is used to treat capillary hemangiomas, especially wine stains.

The method of filling intraosseous hemangiomas with KL-3 polymer adhesive involves the introduction of glue with a polymerization accelerator into the bone cavity with a syringe under pressure. The polymerization material fills the entire cavity, and the blood that is contained there accelerates the polymerization. In order to prevent suppuration, antibiotics are added to the glue. Parallel to the destruction and leaching of the polymer mass, the cavity is filled with young bone tissue.

Recently, **microwave cryogen therapy and microwave hyperthermia have been** used to treat hemangiomas **.** The essence of these methods is to use the microwave frequency (microwave) electromagnetic field in different modes. The microwave cryogenic method provides for cryodestruction immediately after microwave irradiation of a vascular neoplasm. With microwave hyperthermia, the hemangioma tissue warms up with a microwave field to a temperature of 43-45 º C.

The listed methods of treatment are used depending on the form of hemangioma:

- capillary - sclerotherapy with 70% alcohol solution, trichloroacetic acid with 2 % lidocaine solution, prednisone, diathermocoagulation, cryodestruction, selective photothermolysis, surgical removal, with large sizes - elimination of skin defects using local tissues;

- "wine stains" - X-ray therapy, selective photothermolysis, with small areas of lesions - their excision with the subsequent replacement of the defect with local tissues;

- cavernous - mainly sclerosing treatment methods. With fast-growing hemangiums, and especially deep ones, they use the method of vascular embolization, flashing according to Krogius (especially in young children who are

contraindicated for embolization). After these interventions, contributing to the cessation of growth, as well as a decrease in tumor volume, the removal of altered tissues is performed;

- mixed - the first place is occupied by surgical methods, providing for the phased or complete removal of the tumor. With rapidly increasing large hemangiomas, vascular embolization, x-ray therapy, sclerotherapy with surgical removal are combined;

- bone hemangiomas - surgical removal of the changed bone, the introduction of KL-3 into the tumor cavity.

A large selection of treatment methods for hemangiomas in children, on the one hand, facilitates the task of doctors, and on the other, complicates, because it requires great knowledge and experience in choosing one of them that is optimal for a particular patient.

LYMPHANIOMAS

Lymphangioma *(lymphangioma)* - a tumor of dysembryogenetic origin, developing from the lymphatic vessels. Lymphangiomas account for 5-10% of all benign maxillofacial tumors in children. Identified more often before the age of 1 year. Favorite localization is the soft tissues of the face, neck and tongue. The tumor is characterized by slow but progressive growth. Often it is accompanied by other malformations: hemangioma, neurofibromatosis, atrophy of the muscles of the face. Very rarely, age-related regression of tumors due to the emptying of the lymphatic vessels, proliferation and sclerosis of the interstitial tissue is possible. Thus, a small lymphangioma can turn into soft scar tissue.

Lymphangiomas are classified according to the following principles:

1. By etiology:

- congenital;
- acquired (lymphocysts).

2. By structure:

- capillary;

cystic and polycystic.

3. In terms of prevalence:

- local;
- diffuse.

4. According to the effect on nearby tissues and organs:

- with a violation of the function;
- without dysfunction;
- without deformation of the tissues of the maxillofacial region;
- with severe deformation of the tissues of the maxillofacial region.

Capillary lymphangiomas. Favorite locations of capillary lymphangioma are the cheeks, lips, tongue, sublingual region.

Complaints With capillary lim phangioma, parents complain about the child having deformity of one or

another area of soft tissues of the face, which is slowly increasing, painless. With colds, an increase in lymphangioma is observed, which is one of its signs.

Clinic. This is a painless, pasty-like consistency that rises above the surrounding tissue tumor. It resembles a liquid-saturated tissue without clear boundaries, smoothly transitioning to healthy nearby tissues, can put pressure on the underlying tissues and cause bone deformation. In some cases, with atrophy of the subcutaneous fat, a pronounced vascular pattern of the saphenous veins is observed.

If large capillary lymphangioma is localized on the tongue, its function may be impaired. The papillae of the tongue are hypertrophied, changed in color (cherry red) (Fig. 3.90.), With trauma they may cause minor bleeding.

Cystic lymphangiomas

Among other forms of lymphangiomas, cystic forms are more often observed at an early age.

Complaints Parents complain about the presence of a tumor in the child, which increases with its growth. After acute respiratory infections, the tumor can quickly grow, harden, become painful, but never suppresses.Normally, such lymphangiomas reach very large sizes, displace Rachea, esophagus, tongue, resulting in complaints of difficulty breathing and the impossibility of normal swallowing and sucking.

Thus, to establish the diagnosis of lymphangioma, it is necessary to carefully collect the anamnesis (the existence of a tumor from birth or its appearance after a viral disease), conduct a clinical examination and additional studies - puncture, ultrasound, CTM.

Differential diagnos tic performed with lymphadenitis, lateral and medial cysts neck, dermoid, epidermoid, fibroids, lipomas, hemangiomas, fibromas, neurofibromatosis.

Treatment. The complex treatment of children with cystic forms of maxillofacial lymphangiomas is caused by topographic, anatomical and age-related features, and the somatic state of patients. The main type of surgery used in polycystic volume is cystotomy, sometimes in several stages, with further prolonged drainage of the cavity (Fig. 3.98. , 3.99.).

The treatment regimen for children with polycystic maxillofacial region is as follows:

Stage I - preparing the child for surgery: correction of protein metabolism by known methods according to indications (especially in children under 1 year old with lymphangiomas of several areas) and red blood counts (with anemia); study of the blood coagulation system, identification of coagulopathies.

And the stage is surgical intervention in the form of stage cystotomies. The advantage is cystotomy, since the shell of the cysts is very thin and with a large number of them complete removal is almost impossible.

The postoperative period is dangerous with early complications. One of the most dangerous is hemorrhage from the entire surface of the wound arising from

traumatic and prolonged surgical interventions (cystectomy), which is typical for DIC, the genesis of which remains to be fully understood. The prognosis in such cases is usually unfavorable.

The consequences of lymphangiomas can be relapses, secondary deformations of soft tissues and facial bones.

Clinical lesson №5

Pyogenic granuloma, giant cell epulis, dermoid cyst. Benign tumors of the soft tissues of the face. Hemangioma, lymphagioma.

T echnology cal model of the formation

Lesson time: 3 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Pyogenic granuloma. Clinic, diagnosis, differential. diagnosis, treatment. 2. Giant cell epulis. Clinic, diagnosis, differential. diagnosis, treatment. 3. Dermoid cyst. Clinic, diagnosis, differential. diagnosis, treatment. 4. Benign tumors of the soft tissues of the face. Hemangioma, lymphagioma. Clinic, diagnosis, differential. diagnosis, treatment.
The objective of the training session:	Learn to diagnose children with tumors of the dentition . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and	Clinical analysis, assessment, oral control, question and answer

evaluation criteria:	

Practical lesson number 6

Subject: Neurofibromatosis and nevi. Tumors and cysts of the salivary glands. Etiology, clinic , d diagnostics and treatment.

T echnology cal model of the formation

Lesson time : 2 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	To study neurofibromatosis, nevi. Tumors and cysts of the salivary glands. Etiology, clinic. Diagnosis and treatment.
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical, material, projector , computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 . Main stage	1. The division of students into 2 small subgroups , asks	Divided into small groups , watching , participating , listening.

	questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	Student expresses his opinion complements and asks questions
3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive method

USING THE WEAK LINK METHOD

For work it is necessary:

1. Set of questions on the topic.
2. A sheet of paper with a list of groups to keep the game log.
3. Stopwatch.

Test questions on the topic of the lesson:

1. The clinical picture of neurofibromatosis a.
2. Treatment of tumors and cysts of the salivary glands.
3. Types of nevus ov.
4. Clinic , d iagnostika and treatment nevus s.

Practice Text

NEUROFIBROMATOSIS

Neurofibromatosis, Recklinghausen disease, neurinomatosis, congenital neurofibromatous Bruns elephantiasis, loop neurofibromatosis, fibrous mollusk, neuromesodermatodystrophy are all synonyms of one disease.

Neurofibromatosis is a severe congenital disease characterized by the development of multiple neurofibromas, neurin of cranial and spinal nerves in the subcutaneous fat .

Recently, neurofibromatosis has been understood to mean a multisystemic, multi-organ hereditary disease, which refers to phacomatoses (from the Greek *phakos* - spot). The latter represent a group of hereditary diseases in which damage to the nervous system and skin, less often bone tissue, eyes, and sometimes internal organs, is a common factor.

Cases of familial disease are described in the scientific literature; therefore, neurofibromatosis is classified as hereditary diseases by an autosomal dominant monogenic type.

Common theories of the occurrence of neurofibromatosis are endocrine, dysontogenetic and neurogenic. Both the nerve fibers themselves and the

connective tissue elements of endo- and perineuria participate in the development of neurofibromatous tissue . Dysembryogenetic theory is best substantiated , according to which the evidence of participation in the development of neurofibromatosis of ectoderm is damage to the nervous system of the skin, and mesoderm - bone tissue.

The first clinical symptoms can be detected immediately after the birth of the child or in the first years of his life: this is an increase in the volume of tissues of one half of the face. Soft tissues are no different in structure and color from intact normal tissues. With age, children gradually develop characteristic complaints.

It would be a pity . Children or their parents indicate a painless deformation of the soft tissues of the face, jaws, tooth mobility, and age spots that increase with age . Possible visual impairment on the affected side.

Clinic. The permanent clinical signs of neurofibromatosis are age spots, tumors of the skin and subcutaneous fat, nerves , physical and mental disorders, which in 34 *% of* cases appear from birth and in 66 *%* with age.

The first symptom of neurofibromatosis is age spots. They have a light coffee color, a favorite location - the inner surface of the limbs , the back, groin. Above the surface of the skin do not rise. Next to the P & G -element may be depigmented patches of skin.

The second symptom of neurofibromatosis are tumors of the skin and subcutaneous fat, which are detected in 64% of patients and manifest in three forms:

1) elephantiasis (elephantiasis);

2) nodular formations (nodular forms of neurofibromatosis);

3) massive pigmented skin growths (pigmented neurofibromas).

Elephantiasis is characterized by facial deformity due to a tumor covering several areas. More often it is a temporal, parotid, buccal region (Fig. 3.100.). T Which tumor is detected immediately after birth, increased to 2-3 years. The skin above it is not changed in color; it retains its turgor and elasticity , however, it darkens with age, atrophies and hangs in folds. With the nodular form of neurofibromatosis , a large number of neoplasms are observed in the form of different sizes of nodes that are localized on the face and trunk. It is characterized by an increase in individual nodes and the formation of new ones in a certain period of time (from 2-3 months to 2-3 years). Then comes the period of remission, when the tumors do not change either quantitatively or qualitatively. Brown spots on the skin often accompany the nodular form of neurofibromatosis.

Pigmented neurofibromas are more often located on the scalp. The skin here is tightly connected with the tumor, pigmented - dark brown in color, gradually the hair in this area may fall out. If the tumor is localized on the face, it is also dark brown in color. The function of the skin glands is increased, so their secretion accumulates in the folds of the tumor, which complicates facial hygiene. It should be noted that for this group of lesions, other signs of neurofibromatosis are not characteristic.

Nerve tumors are the next sign of illness. In this case, the peripheral nervous system is affected; tumors are spindle-shaped or irregularly shaped nodes covering nerve fibers. Clinically, nerve tumors may not appear, only with surgical intervention can you see them in the form of white (without a capsule) neoplasms

and remove them. In some cases, paresthesia, anesthesia, or hyperesthesia of the surrounding tissues are observed.

The fourth sign of neurofibromatosis is physical and mental disorders (late development of secondary sexual characteristics, acromegaly, etc.). Disorders of the higher nervous system (pseudo-psycho-organic syndrome), manifested by mental retardation, a delay in the development of speech and cognitive function (observed in 81% of patients). The above symptom complex is included in the so-called Darnier tetrad, first described in 1930.

Neurofibromatosis of the maxillofacial region is accompanied by damage to the nose, ears, eyelids. Obs yudayutsya different tooth abnormalities jaw system, manifesting deformations al veolyarnogo process (enlargement), malocclusion, edentulous, hypoplastic iey enamel, dental fluorosis, poppy roglossiey.

D iagnostika neurofibromatosis bases INDICATES on complaints data Clinically Skog examination and radiography. All X-ray signs accompanying this disease can be divided into three groups.

The first group - general changes in the skeleton, having an innate character. These include thickening, dysplasia and lengthening of the bones of the limbs, skull and facial skeleton.

The second group is local changes that occur due to the development and suppression of the tumor on the underlying bones. They appear in the form of defects, destruction, exostoses, periosteal layers.

The third group is “hypertensive” changes arising due to increased intracranial pressure on the bones of the skull during occlusion of the cerebrospinal fluid pathways with tumor nodes.

With neurofibromatosis in the blood, you can detect eosinophilia and leukocytosis - concomitant, but not permanent signs. The genetic analysis of determining the mutation of the NF1 gene in neurofibomatosis is justified in cases of the initial determination of the disease in the family. This helps to clearly determine the prognosis of transmitting it to posterity.

Differential diagnosis should be carried out with soft tissue tumors - lymphangiomas, hemangiomas, fibromatosis, lipomatosis, multiple fibromas, pigmented nevus, as well as Albright syndrome according to the following symptoms:

- lymphangiomas - a test-like consistency of the tumor, with a puncture receiving a light yellow or dirty-cherry sticky fluid, there is no damage to the bones and organ of vision;
- hemangiomas - an increase in the local temperature of the tissues, the presence of a symptom of filling-desolation, receiving blood during a puncture;
- gum fibromatosis - not accompanied by soft tissue tumors, age spots, lesions of the bones and organ of vision;
- lipomatosis - the consistency of the formations is soft, the nodes have no connection with nerve fibers, with a biopsy they receive adipose tissue;
- Albright's syndrome - bone dysplasia is characteristic (on the roentgenogram there are oval and round bone enlightenment sites with a rim of sclerosis on the

periphery, thinning of the cortical layer of the bone) and the absence of tumors along the nerve fibers.

Treatment is aimed at restoring impaired functions of chewing, swallowing, breathing, vision, and eliminating deformations of soft tissues and bones.

Since the tumor tissues supply blood well, significant bleeding is possible during surgery. Therefore, before surgery, the possibility of transfusion of blood or blood substitutes should be considered. Before the operation, the area and volume of tissues that will be removed, and those that will be used to replace the Defect, are necessarily determined (Fig. 3.101. - 3. 1 0 3). Typically, local tissues are used to replace the defect. If the bones are deformed, the essence of the operation is in the field lation de form part. To correct deformation of the bite and dentition, surgical methods are used (they perform different types of osteotomy depending on the type of deformation and the age of the child) and orthodontic treatment. The treatment of children with neurofibromatosis is multi-stage, long, requires the intervention of different specialists (optometrist, neurosurgeon, pediatrician).

Tumors and tumor-like salivary gland neoplasms

Tumor-like neoplasms

For a practical doctor, the classification of salivary gland neoplasms is convenient, as shown in Figure 3.2 .

The most common of these diseases in children are cysts. Cysts of small salivary, sublingual, submandibular, and parotid glands are observed, respectively, in 56; 35.3; 3.7; 5% of cases. Some authors divide cysts by origin into true (retention) and extravasant (traumatic), but this division is very conditional and has no practical value for treatment. Cysts of small salivary glands more often occur on the mucous membrane of the lower and upper lips, cheeks (up to 90 %). This is due to the fact that these areas are injured during eating more than others. Small salivary glands are unevenly scattered throughout the oral cavity - most of them on the mucous membrane of the lips, cheeks and closer to the border of the hard and soft palate.

Complaints with cysts of small salivary glands - the presence of a painless neoplasm (usually on the lower lip), which can increase or decrease, completely disappear, and then reappear. This is because the shell of the cyst is thin and when pressed or bitten, it can open on its own. After the wound heals, saliva can accumulate again, that is, a relapse of the cyst occurs.

Clinic. During the examination, the neoplasm is visible through the mucous membrane in blue, has a rounded shape, clear boundaries. The palpation of the cyst is painless, of elastic consistency, its upper pole is located close to the surface of the mucous membrane. The cyst contains a mucus-like, transparent, yellow liquid - condensed saliva (Fig. 3.104.).

It is necessary to *differentiate* cysts of small sial glands with lymphangiomas . The latter almost never have the appearance of a single cyst.

Treatment is only surgical. A simpler and more effective method is cystotomy - excision of the protruding part of the cyst along with the mucous membrane. The wound surface that occurs after excision of tissues is epithelized. Another treatment method is cyst removal, performed under infiltration (0.5-1 % lidocaine) or general anesthesia (depending on the age and psychoemotional state of the child). Spend two semicircular interconnected incisions of the mucous membrane along the edges of the neoplasm. Stupidly and sharply, the cyst is removed together with the membrane, catgut sutures are placed on the wound.

Relapses of cysts of the small salivary glands are rarely observed, only when the nearby small salivary glands are injured when the cyst is removed.

Cysts of the sublingual salivary glands (wounds). The sublingual salivary glands take the second place in the frequency of lesions by cystic processes. This is due to their anatomical and physiological characteristics: the ducts of Walther are vertical, short, their number reaches 12-15, they are located under the tongue, where they are injured when eating. The large hyoid duct (Bartholin) is unstable and opens on the hyoid meat along with the submandibular duct.

Complaints The child complains that under the tongue is "something" smooth, round, unusual. “It” can disappear and reappear, increasing over time. Sometimes it interferes with the conversation.

Clinic. A rounded neoplasm, located more often in the anterior glands, is determined. Due to the fact that the cyst membrane is very thin, its contents shine through the mucous membrane in blue (Fig. 3.105.). With puncture, cysts receive a clear, yellowish mucus-like liquid.

Particular difficulties for diagnosis and treatment are caused by an hourglass cyst of the sublingual salivary gland; it occurs in isolated cases. This is a retention cyst of the bottom of the oral cavity, one part of which is located above the jaw-hyoid muscle, and the second is lower. Both parts are interconnected by a narrow isthmus, which is compressed by the maxillary hyoid muscle.

Differentiation of cysts of the hyoid salivary gland is necessary with dermoids of the bottom of the oral cavity, vascular neoplasms (hemangioma, lim phangioma), especially with their cystic forms. With a puncture of the dermoid, a yellow-like saline mass is obtained , a hemangioma - blood, ohm lymphangas - a yellowish clear liquid or brown sticky liquid.

Treatment. The main method for the treatment of cysts of the hyoid salivary gland is surgical - cystotomy and (rarely) cystectomy (Fig. 3.106. , 3.107.). Removing the cyst completely (with the membrane) is problematic, since the membrane is very thin and quickly breaks when it is isolated, that is, it is difficult to remove it completely during surgery, and this is not necessary.

Cystotomy is performed under infiltration or general anesthesia (depending on the age of the child and his psychoemotional state). A “window” is cut into the cyst cavity, and then with a knotted suture, the cyst membrane is fixed to the oral mucosa. If the cyst cavity is large enough and deeply located, it is loosely tamped with iodoform gauze for 4-5 days, the end of which is brought into the oral cavity. If the cavity of the cyst is small, then plugging it is impractical. In the

treatment of cysts such as an hourglass during the intervention, it is necessary to pay attention to the isthmus, passing through the diaphragm of the mouth and connecting the two parts of the neoplasm with each other.

Cysts of the submandibular salivary gland in children are very rare.

Complaints are the same as with cysts of a different localization. *Clinic.* In the submandibular region closer to the corner of the jaw, a new formation of soft elastic consistency is determined, which distinguishes it from the tissue of the gland and lymph node, with clear contours, painless on palpation. The skin above it is not changed in color. During the long existence of the cyst, saliva is added to its contents. Poe to get the puncture slime shaped yellow liquid.

Differentiation of submandibular salivary gland cysts should be followed with vascular neoplasms (hemangiomas, lymphangiomas, lim phangiomas), dermoid and epidermoid cysts, and lipomas of this localization.

Cysts of the parotid salivary gland in children develop very rarely and mainly at the age of 12-14 years.

Children and their parents do not make *complaints* at the beginning of the development of cysts, only with large sizes - for the presence of periodically increasing or decreasing deformation of the soft tissues of the parotid region.

Clinic. With large sizes of cysts, the parotid region is enlarged, the skin above it is not changed in color. On palpation, a soft-elastic neoplasm is detected, the borders of which are difficult to determine, since it is located in the thickness of the parotid gland. The sialogram shows a filling defect, with ultrasound - the anechogenic structure of the site. Salivary gland function does not suffer.

Parotid salivary gland cysts must be differentiated from vascular neoplasms and other salivary gland neoplasms based on puncture and ultrasound data.

Treatment of cysts of the parotid salivary gland presents certain difficulties, since it is difficult to isolate a cyst, that is, to conduct a cystectomy (thin membrane). In addition, the cyst is associated with the parenchyma of the gland (located in its thickness), and this is an increased risk of injury to the branches of the facial nerve. Therefore, a cystotomy is performed on the part of the oral mucosa only when the cyst reaches a large size and causes significant deformation of the parotid chewing area.

Clinical lesson №6

Mavzu: Neurofibromatosis and nevi. Tumors and cysts of the salivary glands. Etiology, clinic , d diagnostics and treatment.

T echnology cal model of the formation

Lesson time: 4 hours	Number of students 8-10

Type of occupation:	Clinics lesson
Plan:	1. Neurofibromatosis. Clinic, diagnosis, differential. diagnosis, treatment. 2. Nevuses. Kinds. Clinic, diagnosis, differential. diagnosis, treatment. 3. Tumors and cysts of the salivary glands. Etiology, clinic , d diagnostics and treatment.
The objective of the training session:	Learn to diagnose children with neoplasms of the dentofacial system (neurofibromatosis , nevi , tumors and cysts of the salivary glands) . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

Practical lesson number 7

Subject: Osteogenic tumors of the jaw (osteoma, chondroma, osteoblastoma, hemangioma, myxoma). Tumor-like changes in the bones of the face (fibrotic dysplasia, Cherubism, Oblright syndrome, eosinophilic granuloma).

T echnology cal model of the formation

Lesson time : 3 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	To study osteogenic tumors of the jaw, (osteoma, chondra ohm. Osteoblastoma, hemangioma, myxoma **)**

Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical , material, projector , computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions
3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive method

Using the Hot Potato Method

Test questions on the topic of the lesson:

1. Classification of benign tumors and tumor-like neoplasms of the bones of the upper limbs.
2. Osteoblastoclastoma. Clinic, diagnosis, treatment.

3. Osteoma. Clinic, diagnosis, treatment.
4. Fibrous osteodysplasia. Etiology, clinic, diagnostics.

Practice Text

Osteoma is a benign osteogenic tumor. According to the materials of the clinic of maxillofacial surgery of the Kiev Medical Academy of Postgraduate Education named after P.L. Shupika, osteomas make up about 4% of all primary benign tumors and tumor-like formations of the jaw. It is localized both on the upper and lower jaw (more often). In rare cases, it can be found in the nasal, zygomatic and frontal bones. It occurs more often in adults than in children. A neoplasm is equally often detected in both men and women.

Clinically distinguish the *central* and *peripheral* forms of the jaw osteomas. **Central** osteomas are located in the thickness of the bone, and peripheral - along the edges of the jaw (exostosis). Osteomas grow slowly, painlessly. Therefore, for a long time they go unnoticed, and are detected more often when examined by a dentist (during dental treatment, prosthetics, etc.) or when an x-ray is taken. The first clinical symptom of osteoma is jaw deformity. The central osteoma is located deep in the jawbone. The structure of tumor tissue distinguishes between *compact* and *spongy* osteoma. Typical osteogenic structures are absent in a compact osteoma; Haversian channels are narrow and almost completely absent. In the spongy osteoma, the bone beams are arranged randomly, their degree of maturity is different, and the inter- beam space contains fibro-reticular tissue.

When the osteoma is localized in the body of the lower jaw, the tumor can press on the mandibular nerve located in the canal and cause the corresponding neurogenic symptoms.

Condylar osteoma can impede the movement of the lower jaw. Osteoma of the upper jaw complicates nasal breathing through the corresponding half of the nose, and when localized in the orbit, it leads to a violation (limitation) of the movement of the eyeball and visual impairment. When a tumor is located in the region of the hard palate and alveolar process, difficulties arise that are associated with prosthetics of teeth with removable and non-removable prostheses. Clinically, osteoma can cause facial asymmetry. It is a smooth or tuberous protrusion of a dense consistency, painless, the boundaries are clear, not shifted. The mucous membrane that covers the osteoma in color is usually unchanged , mobile . The tumor is not associated with the surrounding soft tissues and is not suppurative. Ras relying on the periphery of the jaw bones , these formations are called *exostoses.* By exostosis include not only the peripheral osteoma of small size, which are localized in the alveolar processes, but also bone deformations of the jaws occurring after tooth extraction. They can be either single or symmetrical. The *palatine torus* is a peculiar form of exostosis of the upper jaw - this is a bone thickening in the area of the palatine suture (roller), found in some people. Bone deformation in the area of the palatine suture is detected both shortly after the birth of the baby, and as it grows. Congenital symmetrical or

solitary exostoses are also found *on the inner surface of the lower jaw in the premolar region* - the mandibular torus. These exostoses cannot be attributed to bone tumors; they are a peculiar anatomical feature of the structure (form) of the jaw. A synonym for *exostosis* is *osteophyte* - a pathological bone growth on the bone surface.

On the *roentgenogram, a* compact central osteoma is detected in the form of a homogeneous focus of intense darkening of a round or oval shape with relatively clear boundaries of various sizes. The tumor is not connected with the teeth, but in some cases it is projected onto the root of the tooth, which is reminiscent of the odontoma. The peripheral compact osteoma on the roentgenogram has the form of a limited protrusion extending beyond the jaw, with clear even contours. *The spongy osteoma* in the X-ray photograph is heterogeneous, there is an alternation of rarefaction and compaction areas. Similar data are revealed on a computer tomogram.

It is necessary to *differentiate* osteoma with *odontoma.* For *odontoma* characterized rents genologicheski more intense darkening with clear and smooth border, and on the periphery of the tumor is visible illumination strip width of about 1 mm (corresponding odontoma capsule). *Osteoid osteoma* on the x-ray is detected as a focal bone destruction with fuzzy boundaries, surrounded by a rim of sclerotic tissue. *Hyperostosis* is a pathological overgrowth of bone tissue as a result of previous odontogenic and non-odontogenic inflammatory processes (periodontitis, trauma, stomatitis, etc.). At its core, it is nothing but ossifying periostitis **.** On the roentgenogram, its contours are uneven and not so clear.

Osteoma *treatment* is only surgical. The operation is indicated in cases where the tumor causes any disturbances (pain or functional), as well as for cosmetic reasons or with dental prosthetics (if the osteoma or bone protrusion interferes with the installation of a removable or fixed prosthesis). The osteoma is removed within the limits of healthy tissues, and in case of non-tumor exostoses, leveling (smoothing) of the deformed part of the jaw is carried out to the level of a normal bone.

Osteoid osteoma is a benign tumor of osteogenic nature. It is rarely localized in the jaws. It occurs in children after 5 years. In adults, detected up to 30 years of age. It is more often found in the lower jaw, as well as in males.

Patomo rf ology. Macroscopically, a tumor in its central parts is represented by a tissue of red or gray-red color, a loose consistency. Around the focus there is a band (rim) of dense consistency. *Microscopically, the* tumor is represented by osteogenic tissue with interwoven osteoid fibers, which are calcified and turn into bone plates of various degrees of maturity at the periphery of the pathological focus. Osteoblasts and osteoclasts are found in the tumor. No bone marrow cells or adipose tissue. Individual lymphocytes and plasma cells may occur.

Clinic. The main symptom of osteoid osteoma is painful in nature, which occurs for no apparent reason. The pain can be either paroxysmal or permanent. Strengthens at night. With superficial localization of the tumor (subperiosteal), periostitis occurs. Crucial in the detection of tumors give x-

ray data. The *X-ray diffraction* pattern determines the lesion of bone tissue about a round shape with fuzzy borders, usually up to 1.5 cm in size . Along the periphery, the pathological focus is surrounded by a rim of sclerotic bone. The width of the latter is directly dependent on the duration of the disease. The longer the osteoid-osteoma exists, the thicker the sclerosed rim (the area of newly formed bone tissue).

The differential diagnosis is carried out with osteogenic sarcoma, as well as osteoma. In favor of osteosarcoma shows the rapid growth of the tumor , a more homogeneous nature of time Rushen bones, no sclerotic rim around the periphery of the tumor. Differential diagnosis of osteoid osteoma and osteoma is carried out on the basis of x-ray data

Treatment of osteoid osteoma is only surgical. The treatment consists in removing the tumor by curettage or resection of the affected area of the jaw. With non-radical removal of the pathological focus, a relapse of the tumor is possible.

Osteoblastoma is a benign tumor of osteogenic nature that resembles osteoid osteoma and is a variant of it. Synonyms: *osteoblastoclastoma, giant cell tumor, central giant cell granuloma, giant cell reparative granuloma.*

According to our clinic, osteoblastoma occurs in 12% of cases of all primary benign tumors and tumor-like formations of the jaw. The tumor develops in the streets of young, middle and old age, more often in women.

Pathomorphology. Macroscopically, a tumor consists of areas of brown color interspersed with zones of red-gray or yellow. Tumor tissue bleeds profusely. Consists of single or multiple small cavities that contain brown fluid. The tumor may not contain a cavity. On the periphery of the pathological focus there is an ossification zone. *The brown color of the tumor tissue* is due to hemosiderin, which is formed as a result of the breakdown of red blood cells circulating outside the vascular bed (there are no vessels in the tumor , and blood circulates through the interstitial gaps).

Microscopically, osteoblastoma is represented by two main types of tumor cells:

1) osteoblasts - mononuclear cells that take part in bone building;

2) osteoclasts - giant multinucleated cells involved in the resorption of bone tissue. In the tumor, fibrous tissue and islets of newly formed osteoid tissue can be detected.

Clinic. Osteoblastoma is located both in the center of the bone tissue of the jaw and on the periphery of the bone. The tumor develops without severe clinical symptoms. Patient complaints often come down to tooth mobility and the presence of facial asymmetry . When osteoblastoma is localized in the jaw body *(central form}, the* tumor is palpated in the form of a dense, smooth or tuberous, slightly painless or painless formation, the teeth within the boundaries of the tumor are mobile, move. discharge (at an exacerbation of the inflammatory process). The tumor may dostigat s giant size with the advent of ulcers on the skin.

The peripheral form of osteoblastoma is characterized by the presence of limited protrusion located on the alveolar process of the jaw. The base on which the tumor is located is wide. The mucous membrane above the tumor is cyanotic,

there may be fistulas. With an injury, it bleeds and then becomes infected with the formation of ulcers, regional lymphadenitis and the corresponding clinical symptoms (pain, fever, weakness, malaise, etc.). The teeth in the area of the pathological focus are mobile. There are four clinical and radiological varieties of central and peripheral osteoblasts: *cystic, cellular, solid* and *lytic.* X-ray *cystic* form of osteoblastoma is represented by a limited rarefaction of bone tissue with more or less clear boundaries, which resembles a cyst.

Differential diagnosis should be carried out with benign tumors of the jaw (osteoid-osteoma, osteochondroma, ossifying fibroma, ameloblastic fibroma, ameloblastoma, cementoblastoma, etc.), fibrous osteodysplasia, osteogenic sarcoma. Jaw osteoblastoma during suppuration resembles acute or exacerbated chronic osteomyelitis.

Treatment of osteoblastoma consists in its complete removal, which can only be performed by resection of the jaw with or without its continuity (depending on the size of the tumor). With the radical removal of relapses, osteoblastoma is not observed, and with non-radical surgery, not only relapse, but also malignancy of the tumor is possible .

Chondroma

A tumor develops from cartilage. In our clinic, *chondroma was* found in 2% of patients with primary benign tumors and tumor-like formations of the jaw. It occurs more often between the ages of 10 and 60 years. It is found on both the upper and lower jaw. The tumor grows slowly. Over the course of a year or more, it reaches a noticeable value and may become malignant.

Clinic. Depending on the location of the tumor *in the* jaw, they distinguish: **e** *nchondroma* (located in the thickness of the bone tissue) and *echondroma* (peripheral, periosteal, juxtacortical chondroma), which grows outside the bone. Chondroma grows slowly, without pain. The size of the tumor can be different (from a small single node to significant sizes). Dense to the touch, smooth or bumpy, with clear boundaries. It causes deformation of the jaw, tightly soldered to the bone. On the upper jaw, the chondroma is more often located along the middle suture, and on the lower jaw - in the thickness of its body or condyle. The mucous membrane above the tumor in color is not changed. Chondroma is not connected with the teeth, but the roots of the teeth that are in the thickness of the tumor undergo resorption . On the x-ray, it is defined as a focus of destruction of bone tissue of certain sizes with fuzzy borders. The roots of the teeth that are in the tumor undergo resorption. Petrificates (a site inlaid with calcium salts) and foci of ossification (bone formation) are found in the area of the pathological focus . With an echondroma, the boundaries of destruction extend beyond the jaw, which can be clearly identified on the lateral radiograph.

Pathomorphology. Macroscopically, the chondroma has a lobed structure, gray-white in color (resembles cartilage). *Microscopically, the* tumor consists of hyaline cartilage with the presence of randomly located cartilage cells. Identified areas of myxomatosis (mucus), ossification, as well as petrificates. With malignancy, chondrocytes with hyperchromic nuclei, mitoses appear.

The diagnosis is established on the basis of clinical, radiological and pathological data. Chondroma should be differentiated with other tumors of the jaw.

Chondroma *treatment is* only surgical. Due to the fact that recurrence of the tumor often occurs and its malignancy is possible, we recommend radical removal of the chondroma - resection of the jaw, departing at least 1 cm from its borders. Before resection, it is necessary to make a fixing tire.

Bone grafting is performed.

Hemangioma is a benign tumor that develops from blood vessels. It is rare in the jaw. According to our clinic, in 0.5% of cases. It can be detected at any age. Equally often detected in both men and women. Distinguish between *isolated* jaw hemangioma and *combined,* i.e. when the soft tissue and bone are affected simultaneously by the tumor process . Thus, the presence of hemangioma in the soft tissues of the face (on the skin or mucous membrane) suggests indirectly the possibility of the presence of this vascular tumor in the jaws. Dental surgery in this category of patients (extraction of teeth, opening of abscesses, etc.) can pose a great danger to the patient's life . Therefore, in such patients, before performing surgical interventions, it is necessary to take radiographs of the jaw in order to detect the presence of intraosseous hemangiomas, which helps prevent profuse bleeding from bone tissue. In some cases, in order to have a complete picture of the prevalence of a vascular tumor in the bone tissue , angiography has to be done.

Pathomorphology. By their origin, hemangiomas can be attributed not only to true tumors, but also to dysontogenetic formations - *hamartomas* (arise as a result of a violation of embryonic tissue development). In some cases, it is difficult to draw a strict line between the hemangioma, which is a hamartoma or a true tumor. Jaw hemangiomas are more often associated with pathology of venous vessels.

Intraosseous hemangiomas, depending on the structure, can be *cavernous (cavernous), racemose (branched), capillary* or *mixed.* Depending on the peculiarities of the histological structure and regardless of their localization, all tumors developing from blood vessels also distinguish: sclerosing hemangioma (histiocytoma is a vascular-connective tissue tumor); hemangiopericytoma (formed by many capillaries surrounded by spindle-shaped and rounded cells - pericytes); *hemangiofibroma* (consists of blood vessels and fibrous connective tissue); ge mangioendothelioma (develops from the endothelium of blood vessels).

Clinic. Depending on the size of the hemangioma in the jaw, it can be *localized* and *widespread.* Intraosseous hemangioma for a long time, most often, does not manifest itself. It is usually detected by accident during an X-ray examination of the jaws for any diseases (periodontitis, periostitis, osteomyelitis, etc.) or when bleeding from a bone wound occurs during surgery (tooth extraction).

Clinical symptoms most often come down to deformation of the jaw due to its swelling. When it is localized in the area of the alveolar process, tooth mobility appears , as well as hypertrophy and persistent (repeated) bleeding of the

gums. The latter may have a cyanotic or blue-purple color. On palpation, in this case, it is possible to determine changes in bone density, i.e. the jaw has a consistent texture.

On the *roentgenogram of the* jaw, the hemangioma looks like small- or medium - cell structures of rarefaction of bone tissue. The shape of the cells is irregular. Deformation of the jaw may be present . Against the background of the foamy structure of the pathological focus, cells of larger sizes can also be seen . The edges of the cells are surrounded by a sclerotic border. This is a pathognomonic symptom of a vascular tumor. Nap implies a maxillary polycystic mass, but the cell shape is not round, but irregular. There may be periosteal layers, which resembles a malignant tumor.

The diagnosis is specified on the basis of clinical and radiological symptoms, and if the cortical surface of the jaw bone is destroyed, it is possible to puncture the pathological focus. Moreover, in punctate we get blood.

Treatment of intraosseous hemangiomas of the jaw should be carried out only if the tumor causes deformation of the jaw and repeated bleeding from the gums. L.V. Kharkiv et al. (1995) to fill the bone cavities with heme ngiomas, KL-3 polyurethane adhesive was used , which is injected through a thick needle using a syringe. The most radical is the surgical treatment, but it can be traumatic and cause heavy bleeding. Therefore, the surgical method should be preceded by bilateral dressing of the external carotid arteries. It should be remembered that during surgery, there may be a need for adequate replenishment of blood loss. Considering the technical complexity of surgical treatment , sclerotherapy is currently being used (95% ethanol or 2% salicylic acid and 80% alcohol), electrocoagulation , and cryodestruction of small intraosseous hemangiomas.

Fibrous osteodysplasia (synonym: *Breitsev-Lichtenstein disease).* It was first described by V.R. Braitseva in 1929 g of . called *fibrotic osteodystrophy*, and in 1937 L. Lichtenstein singled out this disease in a separate group. Fibrous osteodysplasia can be diagnosed for the first time in both children and adults. It is detected equally often in persons of a female and male gender. According to our data, this disease occurs in approximately 5% of patients with benign tumors and tumor-like formations of the jaw.

There are *monoossal* and *loliossal* forms of the disease.

With monoossal fibrous osteodysplasia, only the jaw is affected, and with polyossal - other skeleton bones are also affected (cherubism, Albright's disease).

Clinic. Fibrous osteodysplasia has the most pronounced growth in childhood and adolescence. The disease is asymptomatic for a long time . The first symptoms that indicate the presence of the disease are tooth pain and bloating, which causes facial deformation. On palpation, swelling of the bone is painless, dense, can be tuberous. The surrounding soft tissues are not involved in the pathological process. Opening the mouth is not difficult. With suppuration of foci of fibrous osteodysplasia, edema and hyperemia of the mucous membrane of the alveolar process occur, regional lymph nodes increase, i.e. Symptoms of exacerbation of the

inflammatory process in the jaw appear. The disease can stabilize, in rare cases, goes into the tumor process.

On the *roentgenogram* more often there are several foci of destruction (rarefaction) of bone tissue of a rounded shape without clear boundaries, and sometimes difficult to distinguish. There is no favorite localization in the jaw. It can be detected both on the upper and lower jaw. More often there is a multifocal lesion.

Pathomorphology. Macroscopically, fibrotic osteodysplasia looks diverse. The pathological focus is represented by a pale yellow tissue with bone inclusions. Changed tissue is easily separated from healthy bones. The boundaries of the focus are difficult to distinguish. *Microscopically,* this malformation is characterized by the proliferation of fibrous-fibrous tissue with the presence of osteoblasts and osteoclasts, which gives it similarity to osteoblastoma, but 8 difference from the latter there are no proliferating osteoblasts and osteoid tissue in the focus.

Diagnosis should be made with osteogenic and non-osteogenic benign and malignant tumors and tumor-like diseases of the jaw, as well as with chronic periostitis and osteomyelitis. The diagnosis is established on the basis of radiological and pathological data.

Surgical *treatment of* fibrotic osteodysplasia. A pathological lesion or lesions of bone tissue are subject to curettage within healthy tissues. In cases where it is not possible to identify the boundaries of the changed bone, and the ossification of the affected area is not expressed, they resort to subperiosteal resection of the jaw area.

Deforming osteosis (Paget's disease). A rare disease, first described by Paget in 1877. It is characterized by deformation of the femur and tibia, spine and skull with severe hyperostosis, thickening and curvature of the bones. From the side of the face, there is a thickening of the zygomatic bones and chin, a nose bridge. The person acquires resemblance to a *lion's face* **,** which gave reason to call this condition as ***l eontiasis ossea*** (synonym: *skull hyperostosis, craniosclerosis).* However, it is a mistake to think that such an appearance can only be with this disease. It is observed with parathyroid osteodystrophy, neurofibromatosis, various tumors of the bones of the facial skeleton.

Cherubism is characterized by fibrous osteodysplasia of the lower jaw in the region of its angles. As a result, the face takes on a puffy-round shape, which resembles the image of the faces of angels. This disease has a hereditary nature, which gave rise to call it familial fibrous dysplasia. Cherubism does not require surgical treatment. With age, the deformation of the face decreases and the face takes on a normal shape.

Albright's disease **.** It is manifested by foci of fibrous osteodysplasia and hyperpigmentation of the skin, which occur against the background of premature puberty. The etiology of the disease is unclear. The disease is congenital in nature. It is found in girls.

Eosinophilic granuloma

The disease is attributed to *histiocytosis (reticuloendotheliosis)*, i.e. lesions in which there is an intensive formation and appearance in the blood or other tissues of histocytic elements (neutrophils, eosinophils, lymphocytes, plasma cells, a lot of nuclear giant cells). For the first time as an independent disease, the eosinophilic granuloma was described by N. I. Taratynov in 1913 . Therefore OTE qualitatively literature it is called by *disease Taratynova.* The disease is quite rare and, according to our data, accounts for about 0.5% of all benign tumors and tumor-like formations of the jaw. The causes of eosinophilic granulomas have not been elucidated. Eosinophilic granuloma is more common in young adults, but can also be found in children. It is localized in the jaw bones, more often in the lower jaw. It can affect other bones of the human skeleton or skull, lymph nodes, skin and parenchymal organs (for example, with Lutterra-Ziva or Hend-Schuller-Christian diseases).

Pathomorphology. Macroscopically, the tissue of the tumor-like formation is an easily disintegrating (crumbling) soft mass of gray-red color with hemorrhages. *Microscopically, the* outer sections of the eosinophilic granuloma consist of granulation tissue. The bulk is represented by histiocytic cells, against which there are foci of necrosis and accumulations of eosinophils, giant multinucleated cells, lymphoid and plasma cells. Eosinophilic granuloma in the process of its growth and, *in* some cases, sprouts a bone and captures soft tissues, which may be accompanied by the appearance of ulcers on the oral mucosa.

Clinic . Patient complaints often come down to pain in the area of the pathological focus. In the maxillofacial region, two clinical forms of the course of the eosinophilic granule are distinguished: *focal* and *diffuse*. Focal (nesting) form x is characterized by the appearance of one or several limited foci in the body or branch of the lower jaw. The diffuse form of the spilled (common) lesion in the jaw, i.e. diffuse damage to the jawbone. The third form of the clinical course of eosinophilic granuloma — generalized — is characterized by damage to not only the jaws , but also to other bones of the human skeleton .

In the initial period of the disease, bleeding gums, loosening of intact teeth are detected. In the future, atrophy of the gingival papillae is observed and the roots of the teeth are exposed. The gingival margins are inflamed, erosion and manifestations on the mucous membrane of the alveolar process appear. After exposure of the roots and loss of teeth from empty holes, a grayish-yellow or grayish-red granulation tissue protrudes.

On the *radiograph* there are limited or spilled foci of bone destruction. Destruction foci can be with clear or blurry boundaries. There is no osteosclerosis on the periphery of the pathological focus. Osteolysis in the lesion focus is heterogeneous .

The final *diagnosis* is made after a biopsy and histopathological examination.

Treatment consists in the complete removal of the pathological lesion by curettage *(exocleation).* With the diffuse form of the eosinophilic granuloma after curettage of the lesion, a course of radiation therapy is prescribed.

Clinical lesson №7

Osteogenic tumors of the jaw (osteoma, chondroma, osteoblastoma, hemangioma, myxoma). Tumor-like changes in the bones of the face (fibrotic dysplasia, Cherubism, Oblright syndrome, eosinophilic granuloma).

T echnology cal model of the formation

Lesson time: 3 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Osteogenic tumors of the jaw (osteoma, chondroma, osteoblastoma, hemangioma, myxoma). Clinic, diagnostic methods , differential. diagnosis and treatment . 2. Tumor-like changes in the bones of the face (fibrous dysplasia, Cherubism, Oblright syndrome, eosinophilic granuloma). Clinic, diagnostic methods , differential. diagnosis and treatment .
The objective of the training session:	Learn to diagnose children with jaw tumors (osteoma, chondroma, osteoblastoma, hemangioma, myxoma) and tumor-like changes in the facial bones (fibrotic dysplasia, Cherubism, Oblright syndrome, eosinophilic granuloma) . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

Practical lesson number 8

Subject: Odontogenic tumors and tumor-like formations (ameloblastoma, odontoma, odontogenic fibroma, cementoma). Cysts of the jaws.

T echnology cal model of the formation

Lesson time : 3 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	To study about dontogenic tumors and tumor-like formations (ameloblastoma, odontoma, odontogenic fibroma, cementoma). Cysts of the jaws.
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical material , projector, computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	Record a subject and listen
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions

3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive method

Using the DARK HORSE method :

To conduct the game you need:

1. The options for questions printed on the sheets (10 options).
2. Checks on the number of options for questions (10).
3. Checks for the draw of students.

Test questions on the topic of the lesson:

1. Ameloblastoma. Clinical manifestations, diagnosis, treatment principles.
2. Odontoma and cementoma of the jaw. Clinic, diagnosis, treatment principles.
3. Methods of treatment of odontogenic tumors of the jaw.

Practice Text

Odontogenic neoplasms develop only in the jaws, since they are associated with the process of dentition.

Ameloblastoma (adamantinoma)

A group of odontogenic tumors of epithelial origin , which are located in the thickness of the jaw, is united *under ameloblastoma* . To this group of tumors include both *true* ameloblasts (synonyms: *adamantinoma, adamantine epithelioma, adamantinoblastoma* et al.), As well as meloblasticheskuyu fibroma (synonym: *soft odontoma),* adeno **ameloblasts** (synonym: *adenomatoidnaya odontogenic tumors),* ameloblasticheskuyu fibroodontomu, odontoameloblastogiu **.** These tumors are characterized by the ability to invasive (destructive, infiltrative **)** growth. Germinating the jawbone, the tumor grows in the soft tissues, and in the upper jaw - in the maxillary sinus. Ameloblastomas are more common in patients aged 17-45 years, although they can be detected at a different age. It is found in both women and men. They are localized more often on the lower jaw in the region of its angle and branch, but can be found in the region of the body of the lower jaw, as well as on the upper jaw. According to our data, ameloblastomas are found in 18% of cases among all benign tumors and tumor-like formations of the jaw. In approximately 94% of cases, the tumor is localized in the lower jaw.

Pat rf ologiya tumor depends on the identified variant forms ameloblastoma.

Macroscopically, the neoplasm is represented by a grayish-pink fine-grained tissue with multiple cysts, does not contain foci of calcification. Histologically distinguish between *follicular, plexiform, acanthomatous, basal cell, granular cell* variants of the structure of true ameloblastoma (N.A. Kraevsky et al., 1993).

The most typical *follicular* type of structure is represented by epithelial complexes of various sizes, which resemble the developing enamel organ

of the tooth germ. Epithelial complexes are surrounded by high cylindrical cells, in the center - the epithelium with reticulation phenomena. The plexiform variant is characterized by strands of the epithelium of irregular shapes, interwoven in the form of a network with frequent reticulation in the central departments.

The acanthomatous type of structure in the central departments is represented by polygonal cells, which resemble cells of a prickly layer of squamous epithelium. There is a tendency to the formation of " horn pearls . "

The basal-cell variant resembles the elements of skin basal cell carcinomas, and with a *granular- cell* type of structure in the central departments there are large cells with granular (oxyphilic) cytoplasm (grains displace the nucleus to the periphery of the cells).

Ameloblastic fibroma (mild odontoma **) is** *microscopically* represented by the islands and cords of the odontogenic epithelium located in the cell fiber and standing tissue resembling the tissue of the dental papilla in the anlage. Cylindrical or cubic cells are located on the periphery of the complexes .

Adenoameloblastoma (adenomatoid odontogenic tumor) is *microscopically* constructed from glandular-like structures formed by cubic epithelium. The epithelium forms strands of a ring-shaped structure or lies on solid islands. A homogeneous oxyphilic substance is found in the lumen of these glandular structures.

With ameloblastic fibroodontoma, the tumor consists of areas with the structure of ameloblastic fibroma, as well as deposits of dentin and enamel. The epithelium does not form typical ameloblastoma complexes.

Odontoameloblastoma is represented by ameloblastoma structures, combined with the deposition of dentin and enamel, which resemble a tooth germ.

All variants (types) of ameloblast have local destructive growth.

Clinic. Ameloblastomas grow slowly, painlessly. Therefore, patients go to the doctor only after a long time after the appearance of the tumor .

Complaints of patients are reduced to the presence of facial asymmetry, aching pain in the jaw and teeth. Patients are asked to remove intact teeth in which pain is localized. Wells after tooth extraction do not heal for a long time. There is a history of periodic swelling of the affected area of the jaw, i.e. tumor growth was accompanied by inflammatory phenomena (periostitis, abscesses, phlegmon), and fistulas on the oral mucosa with purulent or bloody discharge were periodically opened . If the tumor reaches a large size, then the act of chewing, speech may be disturbed. At an external examination, patients have asymmetry of the face due to a spindle-shaped thickening of the jaw. The skin above the tumor is usually not changed in color; it is folded. Regional lymph nodes may be enlarged. On palpation, the tumor is painless, dense, may be tuberous. Opening the mouth is usually not difficult. From the side of the vestibule of the oral cavity, smoothness or bulging of the jaw is determined along the transitional fold , and in some cases, thickening of the front edge of the lower jaw branch. Swelling of the jaw body from the lingual (palatal) side may be detected. The mucous membrane in the area of the pathological focus in color is not changed. In some areas, the tumor can grow the cortical plate of the jaw and spread to the soft tissues. Palpation tumor

without painful, dense. With a bone defect, a symptom of parchment crunch is possible or fluctuation appears. With a puncture, the liquid is yellow or brown. The teeth that are in the area of the pathological focus can be both motionless and mobile. Ameloblastomas sometimes suppurate as a result of trauma to the tumor with antagonist teeth . Suppurative ameloblastomas clinically manifest themselves as the usual odonogenic inflammatory process.

In the clinical picture of ameloblast there is no uniformity, therefore, in the diagnosis, the x-ray method of examining the jaw is of great importance. A typical x-ray picture of most of the ameloblast is a series of rounded cavities of various sizes, which are separated from each other by bone partitions .

The latter can thin out as the tumor grows and completely disappear. Wetted cavity ace are superimposed and even merge with each other. Cysts can have a rounded shape, clear, but uneven edges. Ameloblastoma can also be represented by a single cystic cavity. Around it, in some cases, is a series of small cavities. In the cystic cavity, there may be a retarded or distilled tooth. It is possible that the roots of the teeth are turned into the cavity of the cyst. A. L. Kozyreva (1959) offers the following variants of the radiological picture of ameloblast. A comparison of layered radiographs and pathomorphological studies by Yu.A. Zorin (1965) and N.N. Mazalov (1974) proved the presence of tumor spurs in the bone in the form of cords that penetrate to a depth of 0.7 cm . into a healthy bone, which in most cases is invisible on conventional radiographs. This fact must be taken into account during surgical treatment for radical removal of the tumor. Computed tomography clarifies the location of the tumor.

Diagnosis is primarily carried out with jaw cysts, osteoblastoma, fibrous osteodysplasia, malignant tumors of the jaw bones, as well as with chronic osteomyelitis.

Treatment with ameloblast consists in the radical removal of the tumor within healthy tissues. Curettage of the tumor necessarily leads to relapse, because amelo loblastomas have locally destructive (infiltrative) growth. In patients with ameloblastoma, which is located within the alveolar ridge or the inner edge of the lower jaw branch, sparing jaw resection with preservation of bone continuity is acceptable . When performing a resection of the lower jaw, it is necessary to retreat 2 cm towards a healthy bone from the radiologically visible boundaries of the tumor. If ameloblastoma is located on the upper jaw, then it is removed by partial or complete resection of the jaw, leaving , if possible, the lower ocular edge (to maintain support for the eyeball). Jaw resection is performed subperiosteally if the tumor does not sprout bone tissue. With the spread of ameloblastoma into the soft tissues, a resection of the surrounding tissues is performed. After surgery on the lower jaw, bone grafting is necessary at the same time. Auto- or allo-bone is used as a transplant. In case of untimely removal of ameloblastoma, a complication is possible - a pathological fracture of the lower jaw.

Odontoma is a tumor-like formation, consisting of epithelial and mesenchymal components of tooth-forming tissues. Odontomas are a malformation of dental tissue.

Odontoma (synonym: *solid odontoma)* develops from one or more tooth rudiments . True tumors cannot be attributed to this formation. A. I. Evdokimov (1959) divides odontomas into *simple* (represented by tissues of one tooth mixed in various combinations) and *complex* (built from several rudiments of teeth or many rudimentary teeth). *Simple odontomas,* in turn, are divided into *full ones* (they have a tooth-like or rounded shape) and *incomplete* (depending on the location they are called *crown, root* or *pardontomy* - " pendants " to the roots of the teeth). *Complex odontomas* can be *mixed* (consists of randomly mixed dental tissues of several teeth) and *compound* (consists of a plurality of deformed teeth that are correctly formed and welded together). The division of the servant odont into mixed and purely purely *arbitrary*, because There are no reliable criteria for differentiating two types of complex odontomas. Odontomas are surrounded by a connective tissue capsule. According to our data, odontomas occur in 7% of cases among all benign tumors and tumor-like formations of the jaw. More common in young people . Mostly occurs on the lower jaw in the region of molars. It is found more often in women.

Clinic **.** Odontomas grow very slowly, painlessly. Having formed at a certain age, their growth most often stops and they do not increase in size. In the place where this tumor is located, a permanent tooth may be absent. If the odontoma is located at the site of the passage of the nerve, then its growth is accompanied by pain, which sometimes simulates neurological symptoms. By increasing in size, the tumor can sprout a bone. When an odontoma is injured by teeth - antagonists, its infection and suppuration occurs with the appearance of appropriate clinical symptoms. The main method in the *diagnosis of* odont is radiography. An x-ray is characteristic. Homogeneous tissue of a certain shape is detected (in density corresponds to a tooth) with clear and uneven edges. A narrow strip of enlightenment with a width of about 1 mm is determined along the border of the tumor , which corresponds to an odontoma capsule . Bone at the border of the tumor may be sclerotic. Radiographically salivary stones in the submandibular gland can simulate the odontus of the lower jaw. To clarify the diagnosis, it is necessary to conduct an x-ray of the soft tissues of the bottom of the oral cavity and, with calculous submaxillitis, we determine a more accurate localization of salivary stone. The x-ray density osteoma can approach one odontoma, but unlike the last osteoma, the osteoma is less dense, more homogeneous and there is always no strip of enlightenment along the periphery of the tumor (there is no capsule).

The treatment is to remove the odontoma along with the capsule. The remaining capsule may serve as a source for further tumor growth. During removal with a large odont, a fracture of the lower jaw may occur. Bioinert or bioactive ceramics can be used to fill in an extensive postoperative defect in the jaw, which significantly stimulates regenerative processes in bone tissue. *The forecast is* favorable.

Cementoma develops from odontogenic connective tissue. This group of benign tumors, the main feature of which is the presence of cement-like tissue. In this group there are *ext rokachestvennaya cementoblastoma (true cementoma) tsemen tiruyuschayasya fibroma, periapical tsementodisplaziya,*

cementoma gigantoformnaya (familial multiple cementoma). They are more common at the age of 15-30 years, mainly on the lower jaw. In our clinic, we found it in 2% of cases.

Pathomorphology. Macroscopically represented by dense elastic tissue with soft calcifications or low mineralized bone tissue, which is easily cut with a knife. Dense areas are also revealed . Benign cementoblastoma is formed by cement- like tissue in the form of interwoven complexes. The histological structure resembles osteoid-osteoma, Paget's disease, atypical osteogenic sarcoma. Cementing fibroma is represented by interwoven bundles of cell-fibrous tissue, between which numerous intensely calcified areas are located. In some cases, it may resemble benign cementoblastoma. Periapical cementodysplasia in the early stages is similar to cementing fibroma. Subsequently, more dense areas are formed in it, corresponding in structure to the coarse-fibrous bone. Giant-shaped cementoma is characterized by the formation in the various sections of the jaws of the masses of an intense, almost cell-free, cement-like substance. Cementing fibroma and benign cementoblastoma always have a capsule that surrounds the pathological focus (tumor).

Clinically, these tumors grow asymptomatically. The asymmetry of the face is expressed to one degree or another. The skin in color is not changed. Lymph nodes are not enlarged. The opening of the mouth is free. There is a deformation of the jaw in a certain area. The mucous membrane in color is not changed. In an x-ray, cementomas can often have the appearance of a *dense tissue* (corresponding to bone in density) surrounded by a transparent strip of non-mineralized tissue. Sometimes there are areas similar in density to the tissues of the tooth. In some cases, cementomas look like *cysts,* i.e. represented by a section of bone rarefaction with clear uneven edges. Periapical cement dysplasia is represented by diffuse destructive changes in the form of an alternation of compaction areas (in density close to the density of the tooth) associated directly with the roots of the teeth that do not have a periodontal gap.

The treatment of benign cementoblastoma and cementing fibroma is only surgical . It consists in removing the tumor with the capsule. Gigantoform cementoma (family multiple cementomas), which are found in several family members and periapical cement dysplasia, do not need surgical treatment.

Fibroma

It is rare. According to our clinic, jaw fibroma (intraosseous fibroma) was found in 1% of cases among benign tumors and on the tumor of such jaw formations. It is more common in women. Age of patients - children and young people. It is localized both on the upper and lower jaws.

Pathomorphology. Fibroma consists of fibrous coarse fibrous connective tissue. The number of cellular elements in it is small. Depending on the histological structure, fibroids can be: *ossifying ; petrifying* (contain small focal deposits of calcium salts); *odontogenic* (contain the remnants of dentoepithelial epithelium); *myxomatous* (contain a mucus-like substance); *hon dromyxoid* (consist of a cartilaginous interstitial substance in which elongated and stellate cells are located) and *simple* (consists only of fibrous

tissue). With the development of fibroma from the elements of endo- and perineuria, *intraosseous neurofibromas* arise (formed from fibers of the trigeminal nerve).

Clinic. Fibroids grow slowly, asymptomatically. Having reached a large size, the tumor causes deformation of the jaw. There may be aching pains. The surface of intracostal fibroma during palpation is smooth, the borders are clear , firm to the touch, and painless . Possible infection from carious teeth. In this case, the clinical picture resembles chronic osteomyelitis of the jaw.

On the roentgenogram of the jaw, fibroma manifests itself in an ideally homogeneous discharge of rounded bone tissue with relatively clear boundaries. The pathological focus is bordered by a thinned bone layer without periosteal reaction. In cent re hearth may be portions pet rifikatsii (deposition of calcium salts). Radiologically, intraosseous fibroids resemble a jaw cyst.

The final *diagnosis is* established only after histopathological examination of the removed tumor.

Treatment of intraosseous fibroma is only surgical. The tumor is removed by curettage (curettage).

Clinical lesson №8

Odontogenic tumors and tumor-like formations (ameloblastoma, odontoma, odontogenic fibroma, cementoma). Cysts of the jaws.

T echnology cal model of the formation

Lesson time: 3 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Odontogenic tumors and tumor-like formations (ameloblastoma, odontoma, odontogenic fibroma, cementoma), clinic, diagnostic methods, differential. diagnosis and treatment. 2. Cysts of the jaws. Clinic, diagnostic methods, differential. diagnosis and treatment.
The objective of the training session:	Learn to diagnose children from about dontogenny mi tumors, tumor- E education E (ameloblastoma, odontoma, odontogenic fibroma, cementoma) and cysts of the jaws . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching	Clinical examination, medical history, writing a medical history,

methods:	conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

Practical lesson 9

Topic: Malignant tumors of the jaw bones. Rehabilitation of children after removal of tumors. Clinical examination of children with congenital malformations of the MND, tumors and other dental diseases.

T echnology cal model of the formation

Lesson time : 2 hours	Number of students : 8-10
Type of activity	Introduction of practice news
Plan	Familiarization with the topic.
The objective of the training session	Malignant tumors of the jaw bones. Rea bilitatsiya children after the removal of tumors. Clinical examination of children with congenital malformations of the development of MFD, tumors and other dental diseases.
Teaching methods	Conversation, visual aids on practice
Type of activity	general - collective
Related Visual Aids	Textbook , practical material , projector, computer
Classroom Activities	Metodi Cesky equipped audience
Monitoring and evaluation criteria	Oral survey

Technological chart of a practical lesson

Work stages	Teacher	Student
1. Stages of preparation	1. The purpose of the lesson 2. Preparation of slides on the topic 3. Related literature : 1. Kolesov A.A. - Dentistry	Record a subject and listen

	for children. M., 1991 463 p . 2. Piersyn L. C . - Pediatric Dentistry 2003 3. Kharkov L.V. Surgical dentistry and maxillofacial surgery in children Year of publication: 2005	
2 . Main stage	1. The division of students into 2 small subgroups , asks questions on the topic ; 2. Use of slides and multimedia; 3. conducts therapeutic work; 4. Combines all the information on a given topic, actively participate ni their students encourages and assesses the general.	Divided into small groups , watching , participating , listening. Student expresses his opinion complements and asks questions
3. The final stage	1. Conclusion . 2. Independent work . 3. Homework .	Listen to Record Conclusion

Interactive method

Using the Chamomile Method

Test questions on the topic of the lesson:

1. Malignant neoplasms of the jaw. Diagnostic methods.
2. Biopsy of malignant tumors, the rules and methods of its implementation.
3. Comprehensive treatment of malignant tumors of the MLC.

Practice Text

Malignant neoplasms of the maxillofacial region

Statistical data, etiology

Malignant neoplasms in the structure of the morbidity of the population of Ukraine have a steady upward trend. Every year in Ukraine, 160 thousand people develop malignant tumors. Among them, 1.1% are children.

In children, malignant neoplasms develop in 12 cases per 100 thousand children. Malignant tumors of the maxillofacial region account for 10% of all tumors of this localization, most often occur in children 3-4 and 7-10 years old (the so-called periods of rapid facial growth). In 84% of children with malignant tumors, connective tissue tumors - sarcomas are determined, and in the rest - cancer.

A malignant tumor is a pathological uncontrolled proliferation of cells. For malignant neoplasms are characteristic:

- infiltrative growth, characterized by the penetration of tumor cells into the surrounding tissue with the destruction of the latter. This growth is favored by such factors: the ability of the tumor cell to separate from the tumor node and actively move; to produce "carcinogressins" that stimulate the germination of these tumors in the tissues; decrease in cell adhesion, which facilitates cell movement;

- metastasis - the spread of tumor cells outside the primary tumor node with the formation of secondary tumors in other organs.

There are 3 stages in the development of metastases: invasion - the penetration of a tumor cell through the wall of a vessel into its lumen; cell embolism - transferring tumor cells with blood or lymph flow, stopping them in microvessels, followed by the formation of a cell embolus; penetration of tumor cells from the cell thromboembol through the vascular wall into the surrounding tissues and the development of a new tumor node here;

- recurrence - the occurrence of a tumor in the same place after its surgical removal, which occurs due to the complexes of tumor cells left here, or metastasizing them from the surrounding areas;

- cachexia - a syndrome of exhaustion and weakness of the body. This is a manifestation of paraneoplastic syndrome, characterized by a decrease in body weight due to the breakdown of muscle proteins and the depletion of the fat depot.

Etiology. The causes contributing to the development of malignant tumors are conventionally divided into:

1. **Chemical.** Today 1,500 carcinogens are known. Among them are:

a) precancerogens;

b) true carcinogens.

The latter are distributed in this way:

- by localization - local, resorptive and mixed action;

- by the number of affected organs - monoorganotropic, multiorganotropic ;

- by origin - exogenous and endogenous.

2. **Biological.** Of these, the development of malignant tumors is facilitated by RNA and DNA viruses - oncoviruses (from Greek *oncos* - tumor and lat. *Virus* - poison). The latter are divided into species-specific and species-specific.

3. Physical reasons:

a) solar radiation and ultraviolet radiation;

b) radioactive substances - ^{89}Sr , ^{45}Ca , ^{32}P, ^{33}S ;

c) ionizing radiation;

g) repeated burns;

e) mechanical injury.

Theories of the emergence of malignant tumors in children

There are many theories that explain the mechanism of carcinogenesis - this is mutational (G. Bovers), virusogenetic (L.O. Zilber), the theory of insufficient immunological observation (F. Burnet), epigenomic theory (C. Gay Delberg), and

insufficient DNA repair (G.M. Vilenchik), neoplasms of tumor genes (N, Temin, D. Baltimore), etc.

In the 70s. XIX century Congame proposed a theory of the emergence of tumors in childhood, according to which the latter develop from the cells of embryonic primordia as a result of violations of embryogenesis.

To explain the origin of malignant tumors in children L.A. Dur new offers to use the theory of transplacental carcinogenesis the S . Peller ' a (1960), according to which the majority of tumors in childhood arise transplacentally (develop under the influence of carcinogens that penetrate the fetus through the mother's placenta). In children, tumors of the upper half of the trunk, neck and head are observed 3 times more often than in adults (59% and 21%, respectively). This can be explained by the fact that blood from the upper and lower vena cava does not mix in the right atrium, as a result of which the upper body, head and neck receive blood more saturated with carcinogens.

Now, most oncologists have come to the conclusion that the degeneration of a normal cell into a tumor is the result of persistent changes in the cell genome. Proof of this is the classic experiment with the inoculation of stamped tumors, and an example is the Ehrlich mouse carcinoma cells re-grafted about 95 years ago.

PRINCIPLES OF CLASSIFICATIONS OF MALIGNANT TUMORS

Currently, there are no classifications of tumors that would satisfy clinicians, pathologists, and radiologists, which is due to the variety of clinical manifestations of neoplasms and no less than the number of varieties of their histological structure. Unfortunately, it is impossible to draw parallels between the clinic and the morphological structure of tumors. All this complicates and makes it impossible to create a unified classification of neoplasms, which, in turn, burdens the work of practical oncologists and reduces the effectiveness and usefulness of treating such patients.

Tumor classifications are based on different principles. They are divided by

- localization (topographic anatomical);
- biological characteristics;
- clics of Niko-anatomical prevalence;
- histological structure;
- the degree of differentiation of cells (high, low, undifferentiated). According to the clinical course, tumors are distinguished:
- benign;
- intermediate - tumors in which, under the influence of various factors, the degree of differentiation of cells changes. At the same time, signs of malignant growth appear in them;
- malignant.

The most common is the classification of malignant neoplasms of the WHO, proposed back in 1943.

The International classification of malignant tumors is based on 3 components of the anatomical prevalence of the tumor:

1. The prevalence of the primary focus (T_0/, tumor).

2. Metastasis of the cells of the tumor in the regional lymph nodes (M_{0-x} - node).

3. Metastasis of tumor cells to distant organs (M_{0-x} - metastasis).

The basic rule of TNM is to identify only primary tumors. For operative findings, there is a post-surgical classification of TNM , which is denoted by pTNM . The most simple and convenient for the clinician is this classification of malignant tumors of the tissues of the maxillofacial region (table. 3.2.).

Table 3.2 . Classification of malignant tumors of the tissues of the maxillofacial region

Origin	Soft fabrics	Salivary glands	Bones
Epithelial	Crayfish	Crayfish; basalioma	Crayfish
Connective tissue	Sarcoma Fibrosarcoma Liposarcoma Angiosarcoma Endothelioma Lymphosarcoma Neurinoma (schwannoma)	Sarcoma	Sarcoma Osteosarcoma Chondrosarcoma

FENTAL CONDITIONS

The identification of pretumor processes is of great importance for the timely diagnosis of malignant neoplasms. There is no exact definition of precancer, since the processes in tissues and organs that occur before the development of malignant tumors are diverse. Most often, they are characterized by hyperplasia, metaplasia and atypia of cell growth, with a decrease in their differentiation. This is the condition of the tissues when only one or several signs are lacking that make it possible to diagnose a malignant neoplasm.

Pretumor processes are divided into obligate and optional. At the first, the probability of developing signs of malignant growth is the highest and most frequent. Obligatory pre-tumor processes in children include the only disease that is observed very rarely - pigmentary xeroderma. The disease develops in the first years of life, has a family nature and a high degree of malignancy. The foci are localized in open areas of the body (face, upper limbs). First, red spots appear, which pigment over time. Subsequently, depigmented areas appear next to pigmented skin areas. The skin becomes atrophic, on it are formed areas of gniperkeratosis, telangiectasia and warty growths. The latter, like hyperkeratosis, can be malignant, which is the basis for the immediate hospitalization of the patient.

Optional pre-tumor processes in children include those that exist for a long time and become relatively malignant relatively rarely: papillomatosis, fibromatosis, fibrotic dysplasia, cholesteatoma, eosinophilic granuloma,

chondroma, myxoma, ameloblastoma, myoblastoma, osteoblastoclastoma (lytic form).

Thus, diseases with a long course, tumors and tumor formations, often recurring under the influence of exogenous and endogenous factors, as well as improperly selected and ineffective treatment, can create conditions for malignancy.

DIAGNOSIS AND CLINIC OF MALIGNANT NOVEL EDUCATIONS

In the diagnosis of malignant neoplasms in 78% of cases, an erroneous diagnosis is made, that is, the tumor is not malignant, but benign. Unfortunately, a child is suspected of having a malignant neoplasm only when the tumor reaches a significant size. The so-called consultative period averages 2.7 months. Frequent diagnostic errors are explained by a number of circumstances. This is, firstly, the lack of necessary cancer alertness among doctors who receive children. The latter is associated with the idea that malignant tumors in children rarely occur. Secondly, the insufficient knowledge of the early clinical manifestations of malignant tumors in children by doctors, the complexity of the interpretation of the data of x-ray examination of the tissues of the maxillofacial region; thirdly, the psychophysiological characteristics of children, especially young children, as a result of which they are not able to correctly assess the sensations that arise in the early stages of the disease and talk about them.

Complaints with malignant neoplasms usually appear only when the tumor becomes large. When talking with a doctor, parents say that the child lost weight in a short time, eats badly, becomes nervous, and sleep is disturbed. In the affected area there is a rapidly growing painless neoplasm.

Clinic. There are very few clinical symptoms in the early stages of tumor development. A malignant soft tissue tumor is usually dense, painless, without clear boundaries, rapidly growing, there may be a site of necrosis in the center with its large sizes. The skin around the tumor is pale, with a pronounced vascular venous pattern. It is possible that the facial nerve is injured due to the infiltrative growth of the tumor in the parotid region, which is clinically manifested by paresis of facial muscles on the affected side. With bone malignant tumors in the early stages of clinical symptoms are also almost absent. They can become a radiological "find" of the doctor. Subsequently, with active growth of the tumor, deformation of the jaw appears (Fig. 3.121. , 3.122.).

The appearance of purulent-bloody discharge from the nose and impaired nasal breathing are diagnostic symptoms of a malignant process in the maxillary sinus or nasal cavity. The presence of mobile teeth, non-healing ulcers in the area of the extracted tooth indicates a tumor in the alveolar process.

Malignant tumors in children can be masked by various diseases (periostitis, osteomyelitis, lymphadenitis). Deviations from the usual clinical picture of the above diseases (lack of temperature reaction, prolonged course) should alert the doctor. Therefore, after a thorough history and examination of the child, additional *examination methods* are used . The principle of their appointment in

children is reduced to obtaining maximum information with minimal invasion. Based on this, all methods can be arranged in the following sequence:

- prenatal tumor recognition based on the analysis of the chromosome composition (idiograms) of the cell;
- immunodiagnostics, revealing the disagreement of antigens of tumor and normal tissues;
- sedimentary cancer response (ORP). The essence of ORP is that an insoluble protein appears in the blood serum of cancer patients, which is determined by the sedimentary reaction; this reaction is most informative in the early stages of tumor growth;
- different types of x-ray examination;
- biopsy.

One of the simplest and most common types of X-ray examination is conventional radiography in different styles. X-ray examination to a certain extent allows the doctor to identify signs of malignant growth, tumor volume, its location in relation to surrounding tissues.

An x-ray sign of malignant bone tumors is a change in the intensity of penetration of x-rays compared with the symmetric areas. Unlike dobrok Qualitative tumors and opuholepo Daubney neoplasms boundary transition pathological nidus zdoro in -hand to st fuzzy, cortical bone is destroyed (Fig. 3.123. - 3.125.). In some cases, such a characteristic is also possible with benign tumors x, but priority should be given to a set of clinical, cytological, and morphological studies. It is clear that, having revealed one sign of a malignant tumor, it is impossible to make a final diagnosis.

To clarify the boundaries, localization of the tumor and (to some extent) its volume , tomography is performed.

Computed tomography provides quantitative layered information on the size, "relationship" of the tumor and surrounding tissues. Through the method, a thin section of organs and tissues of the body at different levels is obtained. It is equal in importance to the discovery of x-rays, but computed tomography is accompanied by a larger dose of radiation than a conventional x-ray examination, and this must be taken into account when examining a child. In this study, the best information is obtained about bone structures (Fig. 3.126).

Nuclear magnetic resonance research is based on the possibility of changing the reaction of hydrogen nuclei contained primarily in tissue fluid or subcutaneous fat, in response to radio frequency pulses in a stable magnetic field. Using this research method, it is possible to more accurately than in computed tomography to determine the position of the tumor relative to surrounding tissues, the volume of the neoplasm, which will allow you to choose the right surgical tactics. On nuclear magnetic tomograms, vessels, lymph nodes in soft tissues are differentiated better.

The radionuclide method allows to a certain extent to conduct differential diagnosis between malignant and benign tumors. It is simple, non-traumatic, the radiation load during its use is low. In the early 40s of the XX century. Marshak

and Marinelli reported successful use of radioactive phosphorus (^{32}P) in the diagnosis of melanoma. ^{32}P allows detecting a malignant neoplasm not only in the bone, but also in the soft tissues. Its greatest accumulation is determined in tissues with poorly differentiated cells, where it is kept for 2 days (Fig. 229, 230). In pre-tumor processes, the degree of accumulation of ^{32}P is lower, and in acute inflammatory processes, it is absorbed by the affected tissues and remains there for only 24 hours. Then, the intensity of isotope accumulation decreases to the level of indicators of healthy tissues. In recent years, radionuclide diagnostics has achieved significant success, namely: a complex of radiopharmaceuticals has been created that are triple to certain organs and tissues. This allows you to adequately assess their functional state.

Total differences between malignant and benign tumors	
Malignant tumors	**Benign tumors**
Fast growth	Moderate growth
Infiltrating growth	e kspansivny growth (excluding hemangiomas)
Metastasize	Do not metastasize
Cells are slightly or undifferentiated	Cells are well differentiated
Cell polymorphism and their nuclei	The lack of polymorphism of the cell and their nuclei
Relapses	No relapses
Cachexia	Cachexia does not develop
Immunosuppression	Immunosuppression is absent or not expressed
On the roentgenogram of the bones, the boundaries of the tumor are fuzzy, the presence of spicules, the phenomena of osteolysis	On the x-ray of the bones, the boundaries of the tumor are clear, the phenomena of dystrophy, hyperplasia

In children, malignant tumors also differentiate with chronic productive osteomyelitis, non-pertogenic periostitis.

PRINCIPLES OF TREATMENT

Treatment of patients with malignant neoplasms should be carried out only in specialized oncological clinics, where there are specialists of the necessary qualifications and appropriate conditions (devices for radiation therapy, cryodestruction, hyperthermia, chemotherapeutic drugs).

Complex therapy for cancer patients is provided individually, depending on the location, stage of the tumor process, histological structure of the tumor, the age of the child.

Comprehensive treatment involves surgery, radiation and chemotherapy, immunotherapy.

Surgery. By the 50s of the last century, surgery was the only method for treating malignant neoplasms in children, while the average two-year survival was 0.25 %. Currently, complex therapy of the tumor has been developed , and over 50 % of children can be practically cured. Surgical intervention involves ablastic,

that is, as radical as possible, removal of a malignant tumor and regional lymphatic apparatus. In this case, you must adhere to the methods of zoning and anatomical case. This means that removal of the neoplasm must be carried out within:

- the anatomical region that is formed by the tumor;
- regional lymphatic vessels and nodes, as well as anatomical structures that are located on its distribution paths;
- anatomical fascial cases that limit the spread of tumor cells.

The principle of ablasticity of tumor removal within the boundaries of healthy tissues, which must be adhered to in general oncology, is also necessary in pediatric oncology, but it is very difficult to achieve it in children. This is due to the anatomical and topographic features of the maxillofacial region and the location of the tumor; in addition, cystic regenerated tumors are difficult to remove whole, because the cyst membranes are injured, the fluid pours out.

The second principle of surgical removal of malignant tumors is antiblasticity - measures to prevent the spread and neutralization of tumor cells remaining in the wound. For this purpose, an electric knife, diathermocoagulation, saliva ejector, thoroughly drying the wound, disposable wipes, etc. are used.

Removal of tissues with a significant volume of affected and surrounding them often entails significant deformation and severe disturbances in the postoperative period of chewing, swallowing, and speech functions, which (often) makes it impossible for a child to be in a children's team. In this regard, it is vitally necessary to carry out simultaneous replacement of a tissue defect remaining after removal of the tumor.

Radiation therapy is currently used in more than 75% of cancer patients and in 88% of patients with tumors of the oral cavity and pharynx.

The principle of this type of therapy is based on the selective action of rays on npcdifferentiated tumor cells. But along with the tumor cells, healthy tissues die at different stages of development. For radiation therapy, different types of ionizing radiation are used (X-ray, electron, neutron, proton, etc.).

Depending on the characteristics of the supply of radiation energy to the pathological focus, external and internal methods are distinguished. With external methods, the radiation source is located at a distance of 1.5-25 cm from the surface of the tumor (close focus) or more than 30 cm (far distance), or on the irradiated surface (contact). Internal irradiation can be internal tissue (the radioisotope is introduced into the tumor in the form of needles, spheres, etc.) or intracavitary . The recommended total dose for children is 50 Gy.

The sensitivity of a malignant tumor to radiation depends on:

1) the histological structure and degree of differentiation of tumor cells (with an increase in the degree of differentiation, the resistance to radiation increases);

2) the nature of tumor growth (exophytic tumors are more radiosensitive than infiltrative and ulcerative);

3) the growth rate of tumors (tumors with a fast growth rate respond better to radiation than slow-growing);

4) tumors with good oxygen supply are more radiosensitive than poorly supplied with oxygen.

To increase the sensitivity of the tumor to radiation, local hyperthermia is performed, hyperglycemia is caused, and radio modifiers (e.g. metronidazole) are administered.

Depending on the reaction of malignant tumors to radiation, they are divided into the following groups:

1) radiosensitive (lymphosarcoma, reticulosarcoma, lymphogranulomatosis);

2) moderately sensitive (squamous forms of cancer with varying degrees of differentiation);

3) radioresistant (osteogenic, fibro- and chondrosarcomas, neurosarcoma, melanoma);

4) moderately radioresistant (adenocarcinoma).

For the prevention of local radiation reactions, various ointment dressings are used (with rosehip oil, sea buckthorn). The prevention of inflammatory radiation reactions is facilitated by the mechanical protection of important organs from radiation (thyroid gland, genitals, kidneys, liver). In addition, detoxification therapy is carried out, hepatoprotectors, and stimulants of the immune and hematopoietic systems are prescribed.

Chemotherapy is based on the cytostatic , cytotoxic and immunodepressive effects of oncopharmacological drugs on the tumor.

The first action of these agents is aimed at the destruction of tumor cells due to the influence on different links of their metabolism, and the second - on the regulation of proliferative processes due to receptor-mediator mechanisms.

Such groups of antitumor drugs are distinguished:

1) hormonal;

2) alkylating (they are called "chemical knives");

3) antimetabolites;

4) herbal preparations;

5) antitumor antibiotics.

Since 1989, after the discovery of the so-called Vascular Endothelial Growth Factor (VEGF), fundamentally new antitumor drugs have been created. Dey Corollary based on their ingibirova SRI VEGF , which slows down the growth of the tumor and its metastasis.

Chemical antitumor drugs are injected into the tumor, into the cavities, inside the vessels (intraarterial, intravenous, intralymphatic). Features of chemotherapy in children are as follows:

1) the best antitumor effect can be obtained by combining polychemotherapy with radiation;

2) chemotherapy is carried out against the background of non-specific infusion-anabolic therapy (amino acid mixtures, glucose, electrolytes, vitamins, reta-pain, nerobol);

3) during polychemotherapy, no more than two drugs are used simultaneously;

4) the most effective is the intravenous administration of drugs.

Immunostimulating therapy for malignant neoplasms currently occupies an important place. The main object of its action is T-lymphocytes, which control the appearance of atypical cells. The synthesized preparations of thymosin, tpmalin, thymorin, T-activin alone do not have an antitumor effect, but they enhance and resume the activity of T cells weakened by chemotherapy or radiation. In addition, certain positive results of active specific immunotherapy (antitumor vaccination) were obtained. Herbal preparations (phytohemagglutinin), the hormone T-lymphocyte turn neutral lymphocytes into killer cells, the synthesis of which in malignant tumors is impaired.

Currently, genetic engineering is used to treat malignant tumors, as well as antisense therapy; the principle of action of the latter is to stop the functioning of a particular gene due to inhibition of the synthesis of the corresponding protein. For effective pharmacotherapy of malignant neoplasms, it is necessary to diagnose the level of damage to the genome of cells and their epigenome level, system of cellular signals.

The consequences of the treatment of malignant tumors. Antitumor treatment affects bone and soft tissue growth; as a result of this, their deformations arise. It is possible that both local influence and influence through central mechanisms on the growth of these tissues. The latter may be due to growth hormone deficiency. Radiation therapy can lead to a decrease in cognitive ability in children, affect the functions of the sex glands associated with both the production of hormones and the viability of hermentative cells. Chemotherapy negatively affects the heart, liver, causing various complications (pericarditis, myocarditis, arrhythmia, myocardial infarction, hepatitis). Therefore, chemotherapy must be followed by protective treatment .

The most serious complication of antitumor therapy is the development of a second primary malignant tumor.

The consequences of surgical treatment of malignant tumors of the face is the formation of significant defects and deformations of soft tissues and skeletons. The surgeon carries out the elimination either immediately after removal of the neoplasm (depending on its size, location), or after several months.

Thus, the treatment of children with malignant neoplasms is a complex process, since it is necessary not only to influence the tumor, but also to protect the body from the negative effects of it and the treatment itself. All children treated in specialized oncostation facilities should be supervised by an oncologist and a regional dentist. Clinical observation must be carried out up to 16 years, and then transfer the patient to an adult medical institution. Such children are disabled and have all legal rights to receive a social pension.

Prevention of malignant diseases in children is a timely diagnosis and qualified treatment of precancerous conditions.

Clinical lesson №9

Malignant tumors of the jaw bones. Rehabilitation of children after removal of tumors. Clinical examination of children with congenital malformations of the MND, tumors and other dental diseases.

T echnology cal model of the formation

Lesson time: 4 hours	Number of students 8-10
Type of occupation:	Clinics lesson
Plan:	1. Malignant tumors of the jaw bones. Clinic, diagnostic methods, differential. diagnosis and treatment. 2. Rehabilitation of children after removal of tumors. 3. Clinical examination of children with congenital malformations of the MND, tumors and other dental diseases.
The objective of the training session:	Learn to diagnose children from about dontogenny mi tumors, tumor- E education E (ameloblastoma, odontoma, odontogenic fibroma, cementoma) and cysts of the jaws . Learn to collect anamnesis from the parents of the child, examine the anatomical and functional disorders and provide primary care. Learn to write a medical history, choose the optimal period and method of operation, depending on the age of the child. Learn the features of postoperative child care and wound care. Give parents advice on caring for their child.
Teaching methods:	Clinical examination, medical history, writing a medical history, conversation.
Type of occupation:	Mass collective, per person
Visual Aids on the topic:	Dental chair stomalogicheskoe mirror, pin p is, spatula s , l of current medical table, alcohol, furatsilin, marlievye beads , sterile gloves
Situation for the lesson:	Clinically equipped simulation room, clinical room
Monitoring and evaluation criteria:	Clinical analysis, assessment, oral control, question and answer

INDEPENDENT LESSON

Necessary guidelines for the development of self-study classes.

Independent work №1

Anatomy of the sky. Innervation and blood supply to the muscles of the soft palate. Preparation of patients with congenital cleft palate. Wound care after surgery.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of the anatomy of the sky, the name of the muscles, innervation and blood supply to the soft palate. Learn the features before surgery and postoperative care for children with congenital cleft palate.

Expected results : When doing independent work, the student studies and learns the anatomy of the sky, muscle names, innervation and blood supply to the soft palate. Find out what to operating preparation and post-operative care of children with cleft palate.

Embodiments of the self-study: presentation (with the help of programs: the MS a PowerPoint, PromoShOU, Impress, of Kingsoft Presentation, ProShow Producer, of SmartDraw , Prezi Classic Desktop, VideoScribe, a reply Wink, SlideDog, as Adobe Presenter, Hippani Animator) , essay, video, flash animation , stand and in other forms .

When the self-study recommended Sun to use sleduyushy sources of information: the Internet, Scientific practical journal Dentistry and other foreign magazines on the subject , key (1,2,3,4,5) and additional (1,2,3,4,12,14 , 17,18,19) literature .

Independent work

Embryogenesis Small anomalies of development. Fistulography. Technique and indications.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of embryogenesis of MHL. Learn the etiology of the development of small anomalies and their clinic. Learn to carry out fistulography.

Expected results : When doing independent work, the student studies and recognizes the embryogenesis of the MHL. Recognizes the etiology of the development of small anomalies and their clinic. Learns to carry out fistulography.

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work

Cysts and fistulas Methods of examination of fistulous passages.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of cysts and fistulas of HMO, methods for their examination.

Expected results : When performing independent work, the student learns and recognizes cysts and fistula of the FHM, methods of their examination.

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work

TMJ anatomy. Functional changes in patients with TMJ pathologies. The importance of orthodontic treatment in the treatment of primary bone pathologies. Prevention of primary bone pathologies of the joints.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of TMJ anatomy and functional changes in patients with TMJ , the values of orthodontic treatment in lech enii primary bone pathologies, etc. rofilaktik and primary bone disease of the joints .

Ozhydaemye results : When the independent work of student studies and learns the anatomy of the temporomandibular joint, functional changes in patients with TMJ , the values of orthodontic treatment in lech enii primary bone pathologies, etc. rofilaktik in primary bone disease of the joints .

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work

Clinical features of benign and malignant malignant tumors in children. Classification of tumors.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of the clinical features of benign and malignant tumors of the MHF in children. Classification of tumors .

Expected results : When performing independent work, the student studies and learns the clinical features of benign and malignant tumors of the MHF in children. Classification of tumors .

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work
Pyogenic granuloma, giant cell epulis, dermoid cyst.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of the etiology, clinic, diagnosis and treatment of pyogenic granuloma, giant cell epulis a, dermoid cyst .

Ozhydaemye results : When the independent work of student studies and learns the etiology th , clinics have , diagnostics from and treatment of pyogenic granuloma, giant cell epulis and, dermoid cysts .

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work
Benign soft tissue tumors of the face, hemangioma, lymphangioma. Biological treatment of hemangiomas. Myxoma of the jaws.

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of etiology, clinical picture, diagnosis and treatment of benign soft tissue tumors person, hemangioma, lymphangioma, l echeni I hemangiomas biological method, m Iksom jaws .

Ozhydaemye results : When the independent work of student studies and learns the etiology, clinical features, diagnosis and treatment of benign soft tissue tumors person, hemangioma, lymphangioma, l echeni I hemangiomas biological method, m Iksom jaws .

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe

Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work

X-ray diagnosis of tumors. Modern diagnostic methods (ultrasound, MRI, CT, orthopantomography).

Purpose : To teach the student the independent application of knowledge and skills in practice. The study of X-ray diagnostics of tumors using modern diagnostic methods (ultrasound, MRI, CT, orthopantomography).

Expected results : When doing independent work, the student studies and learns the radiological diagnosis of tumors, with modern diagnostic methods (ultrasound, MRI, CT, orthopantomography) .

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

Independent work

Features of the treatment of cysts (cystotomy, cystectomy).

Purpose : To teach the student the independent application of knowledge and skills in practice. Study of the features of cyst treatment (cystotomy, cystectomy) .

Ozhydaemye results : When the independent work of student studies and learns about Sobienie her treatment of cysts (cystotomy, cystectomy) .

Forms of independent work: presentation (using programs: MS PowerPoint, Promo SHOW, Impress, Kingsoft Presentation, ProShow Producer, SmartDraw , Prezi Classic Desktop, VideoScribe, Wink, SlideDog, Adobe Presenter, Hippani Animator) , abstract, video, flash animation , stand and in other forms.

When doing independent work, it is recommended to use the following sources of information: the Internet, the Scientific and Practical Journal of Dentistry and other foreign journals on the subject, the main (1,2,3,4,5) and additional (1,2,3,4,12,14, 17,18,19) literature.

5. GLOSSARY

An abscess is an acute inflammatory process, accompanied by an accumulation of pus. It is caused, as a rule, by the accumulation of pathogenic microorganisms (most often bacteria). Periodontal abscess is a localized infection in the tissues of the gums and alveolar bone. Periapical abscess - an abscess near the root of the tooth. May occur as a result of tooth necrosis (as a result of untreated caries or tooth injury). An abscess can also occur after a crack or fracture of a tooth root.

Agenesis is the absence of tooth formation. In this case, the tooth embryo does not form. This is an anomaly of a genetic nature, which manifests itself, as a rule, in the process of replacing milk teeth with permanent ones. In this case, the milk tooth either does not fall out or falls out, but in its place the permanent one does not grow. Most often, wisdom teeth (third molars), incisors of the upper jaw and premolar are affected by the phenomenon of agenesis. Agenesis can be either unilateral or bilateral.

Adentia (anodontia) is a rare genetic disease characterized by the congenital absence of all deciduous or permanent teeth. Adentia is associated with a group of skin and nerve syndromes called ectoderm dysplasias.

Nitrous oxide - a colorless inert gas with a sweet smell, used in dentistry as a sedative. This is a weak inhalation anesthetic, which allows you to reassure the patient during dental procedures. When nitrous oxide is inhaled, a relaxed sleeping state occurs.

Alveolus (tooth hole) - the bone cavity of the upper or lower jaw, into which the tooth is directly embedded and fixed in it from the side of the root canals. At the bottom of each root there are apical openings in which blood vessels and nerves pass.

Alveolitis is an inflammatory process in the alveolus of a tooth that occurs, as a rule, after tooth extraction. A provoking factor for the occurrence of alveolitis is the infection of a blood clot in the hole, or the so-called “dry hole”, which is not protected by a blood clot and therefore pathogenic microorganisms easily enter it. Signs of arising alveolitis after tooth extraction are: severe pain, unpleasant sensation when touching the tongue hole, unpleasant smell from the hole.

Alveoloplasty - a surgical operation to form the structure of the alveoli before the installation of a denture.

Alveolotomy is a surgical operation in which the wall of the alveoli of the tooth is dissected. An indication for such an operation is the presence of fragments of the tooth after removal, the presence of uncut tooth rudiments. Alveolotomy always accompanies the operation of resection of the apex of the root of the tooth.

Alveolectomy is a surgical operation to remove the so-called alveolar elevations located along the edges of the alveoli. There are several reasons for the

occurrence of such elevations: improper tooth extraction, absence of adjacent teeth.

Alveolar abscess is an acute purulent inflammatory process in the alveolus of the tooth. It develops gradually after the tooth treatment process, when an infection remained in the tissues surrounding the tooth. Milk teeth with signs of an alveolar abscess should be removed. Permanent teeth with an alveolar abscess are subject to endodontic treatment.

The alveolar bone is the part of the jaw bone on which the teeth are directly located.

Ameloblast is the germinal cell of the epithelium involved in the formation of tooth enamel. Just before teething, these cells disappear.

Ameloblastoma is a benign odontogenic tumor. It develops asymptomatically. Ameloblastoma can be detected by x-ray. Often it can be confused with a follicular cyst. It occurs, as a rule, in adults, and sometimes in adolescence. The treatment is exclusively surgical (curettage).

Imperfect amelogenesis is a malformation of tooth enamel. In this case, both milk and permanent teeth can be affected. There are various forms of imperfect amelogenesis: hypoplastic, hypocalcinised, hypomatous. In this case, the enamel may not be fully formed, insufficiently mineralized (soft), spotty, thin, smooth, brownish. In the treatment of this pathology, restoration with crowns or adhesive veneers is recommended.

Amputation of a tooth root is a surgical operation that is performed when only the tooth root is destroyed and its crown part is not damaged. In this case, access to the root is carried out by flaking the flap in the area of the tooth gingival pocket. Then the root is cut with boron and removed. This operation is indicated in complex cases when the roots of the tooth are not amenable to conventional therapeutic treatment.

Anamnesis (medical history) - includes a description of all the symptoms and stages of the disease, which is the most important factor for proper diagnosis. It also includes a mandatory description of previous diseases, allergies, family and occupational diseases, medications taken, risk factors and more.

Angioma is a vascular tumor, a skin defect that can persist throughout life or disappear suddenly. There are several types of angiomas that vary in color and size. Some of them, such as hemangiomas, are quite common among newborns. With hemangioma, excessive expansion of blood or lymph vessels is observed. Red spots of various intensities appear on the skin.

Anesthesia - anesthesia, the purpose of which is to remove sensations, especially sensations of pain. Anesthesia can be applied to one organ, an area of the body, or to the whole body. The use of anesthesia allows the doctor to better and faster to carry out various manipulations.

Local anesthesia - is used for any one specific area and, as a rule, is carried out by injection of local anesthetics in the tissue, as well as by the use of painkillers or sprays. A local anesthetic can be used both in therapeutic and surgical procedures in dentistry. When using anesthetics, safety considerations must be followed to avoid allergic reactions or anaphylactic shock.

General anesthesia (general anesthesia) is an anesthesia method in which consciousness is turned off and there is a complete absence of pain sensitivity, which is achieved by using intravenous injection or inhaling narcotic drugs. When applying general anesthesia, constant monitoring and control of vital functions is required: respiration (respiratory rate, tidal volume, oximetry), hemodynamics (heart rate and blood pressure, muscle tone). The use of general anesthesia necessarily requires the presence of an anesthetist.

Conduction anesthesia is one of the methods of local anesthesia, in which the anesthetic acts directly on the nerve endings.

Dental ankylosis - fusion of the alveolar bone with cement or dentin of the tooth as a result of absence or atrophy of the periodontal ligament. The reason is the failure of one of the milk molars and the absence of a permanent tooth.

Anodontics is a congenital absence of teeth, which is usually accompanied by pathologies in other organs. Anodotia is complete when there is no permanent bite, and partial when there is a lack of at least one tooth.

Anomalies in the development of teeth - congenital or acquired disorders in the development of teeth, dentitions, jaws, bite. The causes can be of various origins: congenital (genetic), associated with endocrine disorders, abnormalities of the fetus under the influence of negative factors, artificial feeding, rickets, hypovitaminosis, disorders in the ENT organs (nose and tonsils). Anomalies in the development of teeth can take many different forms: a change in the color, number or shape of the teeth, lack of teeth, the presence of supernumerary teeth, changes in the size of teeth, the structure of hard tissues of teeth, the timing of teething, malocclusion.

Antibacterial agents - antibiotics, antimicrobial drugs used in the treatment and prevention of bacterial infections. They either kill bacteria or slow down their growth. Antibiotics are not effective against viruses, and their misuse can lead to the emergence of antibiotic-resistant microorganisms.

Antihistamines are a type of pharmaceutical that resists the histamine receptors in the body. There are two of the largest classes of antihistamines. H1 are used to treat allergic reactions by instillation in the nose with itching, runny nose and sneezing, as well as for insomnia, dizziness. H2 is used to treat diseases caused by excess acidity of gastric juice (peptic ulcer, reflux).

Antiseptic agents - used in dentistry to remove plaque in the form of sprays, rinses, gels, etc. They are not addictive, non-toxic and have a fairly wide antimicrobial spectrum of action. These include, for example, chlorhexidine, miramistin, listerine.

Aplasia - abnormal development of cells or tissues, developmental delay. This dysfunction usually occurs immediately after birth, is not transmitted and can be congenital.

Arthrosis (osteoarthrosis) is the result of the degradation of the cartilage that covers the ends of the bones in the joints. The articular cartilage wears out and becomes inflamed, which can be accompanied by severe pain.

Bacterial infection is a disease caused by bacteria, unicellular organisms. There are a huge variety of bacteria that can affect the human

body. Depending on the type of bacteria, an infection of an organism occurs. It can be a throat (bacterial tonsillitis), a bladder (cystitis), a heart (infectious endocarditis). With severe infection, in some cases, a bacterial infection can be fatal. Bacterial infections are treated with antibiotics.

Toothless mouth (see **Agenesia**)

Benzocaine is a local anesthetic. It is present as an active ingredient in a variety of over-the-counter painkillers, in particular to alleviate the condition of aphthous stomatitis. In combination, for example, with antipyrine (phenazone), benzocaine is present in ear drops to relieve pain and remove earwax.

Oral wart - can occur on the surfaces of the tongue, lips or internal mucous surfaces of the cheeks. Sometimes small white wart formations can appear around the mouth, and their number can reach hundreds.

Upper lip frenulum - film, membrane, fold connecting the upper lip and gum. If the frenulum of the upper lip is too short, it can lead to impaired motor activity of the upper lip, to problems of breastfeeding, causing pain when the baby is sucking the chest and pain in the mother's nipple. In addition, this can disrupt the correct formation of the dentition and lead to the formation of a diastema (gap between the upper front teeth). To eliminate the defect, the operation of frenulotomy is used - dissection of the frenulum. The operation takes only a few seconds, after which the child can immediately begin to suckle.

Internal resorption - resorption of dentin of the root canals after amputation of the pulp. It occurs a few months after pulpotomy. This can occur in cases where the affected pulp is not completely removed, and part of the changed infected tissue provokes the spread of inflammation to the mouth of the root canals.

Intrapulpral anesthesia - used for deep anesthesia of the pulp in endodontics when other methods of anesthesia did not give the desired results. This method of anesthesia is extremely effective, but at first it is very painful.

Congenital absence of teeth (see **Adentia**)

Tooth dislocation - tooth detachment or displacement as a result of trauma, in which the root part of the tooth or its socket ruptures. It is necessary to talk about extrusive dislocation when a tooth is pushed out of a hole, and about an obsessive dislocation when a tooth is pushed into a hole (an extruded tooth, intrusion). If we are talking about a dislocation of a milk tooth, this can lead to damage to the rudiment of the permanent tooth underneath, which can subsequently lead to spotting or hypoplasia of the enamel of this permanent tooth.

Loss of **teeth** - normal loss of milk teeth occurs gradually, followed by their replacement with permanent teeth. Sometimes premature tooth loss occurs in children, as well as permanent tooth loss as a result of periodontitis, hypophosphatasia and pubertal periodontitis. More often it affects girls.

Halitosis - see Halitosis

Hemangioma is a benign vascular tumor. Most often found in children of the first year of life and are of congenital origin. It is usually located on the head or neck, as well as in the mouth (tongue, mucous membrane of the lips and cheeks). Hemangiomas often disappear themselves with age.

Hematoma - a blood tumor of soft tissues. Occurs when a blood vessel ruptures. In this case, an accumulation of blood is observed in the cavity. May occur, in particular, in case of injury (strong blow or fracture).

Hematoma with teething - occurs a few weeks before the teething of a milk or permanent tooth as a result of soft tissue trauma during chewing and talking. Such a hematoma resolves after the tooth has erupted.

Hemisection is a surgical operation usually performed on the lower molars to preserve the roots of the teeth by removing one of the roots of a multi-root tooth in the case when this root is severely affected and the remaining roots are not affected. The hemisection operation is carried out using a special cutter. Other indications for hemisection: subgingival caries, deep periodontitis on one of the roots, root fractures (when you need to save one of the roots).

Herctomy - extraction (removal) of wisdom teeth - the third molars of the upper or lower jaw. In children and adolescents, these teeth are not yet fully developed and should be removed if they are improperly located or are affected by caries. The procedure is painful, carried out under local or even general anesthesia and requires a rehabilitation period, since there are complications (swelling of the neck, bleeding, pain, restriction in opening the mouth).

Gingivoplasty is a simple procedure performed under local anesthesia, which allows you to change the shape of the gums (remodeling the gums).

Gingivectomy is a simple procedure that allows you to change the height of the gum to the tooth, the removal of hyperemic parts of the gums that go into the tooth enamel. It is used mainly for aesthetic purposes.

Gingival hyperplasia - an increase in the size of the soft tissues of the gums in the mouth. It is caused by a number of factors from pregnancy to systemic diseases. Hyperplasia of the gums can impede the process of chewing food and violate the aesthetics of the oral cavity. Often accompanied by bleeding gums and soreness.

Hypersalivation - salivation, excessive salivation. Sometimes it occurs in patients who cannot completely keep their mouths shut. Hypersalivation is often a precursor to vomiting. Also, the causes of hypersalivation can be: fear of water, vitamin B3 deficiency, gastro-food reflux, excessive use of starch, pancreatitis, liver disease, mouth ulcers, infections of the oral cavity, taking some medications.

Hyperodontics (polyodontics) - the presence of **supernumerary** teeth in addition to the usual dentition. Such teeth can appear anywhere in the dental arch. A supernumerary tooth in the anterior-median region of the upper dental arch is called the mesiodent **.** The causes of hyperodontics are hereditary factors, ecology, the presence of supernumerary teeth can lead to a delay in the development of normal teeth.

medium for tumors. That is why they are extremely diverse.

It should be noted that clinicians are often a final diagnosis FORMS ruyut only on the advice of a pathologist. At the same time, the microscopic structure does not always determine the future biological "behavior" of the tumor. For example, some morphological feature and malignant tumors YaV not lyayutsya strictly specific and

may be objectified elyatsya inflammatory, dis plastic, and other degenerative processes in the functional re construction body or its parts. This thesis primarily relates to the tissues of the child's body , where the processes of restructuring and development take place constantly, continuously.