Multiple malformations of the teeth (case report)

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Questions of congenital malformations of the teeth remains relevant for dentists not only in terms of finding embryogenesis as is practical to prevent them. Domestic and foreign literary sources contain sufficient information, illuminating the etiology and pathogenesis of dentoalveolar anomalies. [5]

A large number of dental system anomalies can be explained, first, a variety of reasons causing them, and secondly, the specifics of the mechanism of development of these pathologies and, thirdly, the individual characteristics of the organism. Dentoalveolar anomalies are divided into individual teeth, dentition and occlusion. Individual teeth anomalies include anomalies of quantities position, quantity, shape, time of eruption, the structure of hard tissues.

Anomaly of terms dentition (retention), according to most experts, are the result of an atypical structure of the tooth, improper bookmarks in the jaw, or delay the change of premature removal of deciduous teeth , underdevelopment of the alveolar bone inflammation or injury jaws to makrodentia. The normal size of the teeth and jaw bones are in certain proportional relationship, breach of which leads to the lack of sufficient space in the dentition teething and thus retention of some of them. [3]

In this regard, interesting results of anthropometric measurements of human skulls from the Neolithic period to the present day, the authors of which was isolated as the leading etiologic factor reduction of the jaw bones and teeth, occurring in the course of phylogenesis, due to the use of modern humans refined foods. Research on the problem of formation of retention of permanent teeth, allowing domestic and foreign authors identify as the leading etiologic factors endocrine system: hypothyroidism, goiter, idiopathic hypoparathyroidism, pseudohypoparathyroidism, cerebro – pituitary changes, Frohlich disease, rickets. Mechanisms of formation of retention are directly dependent on the three major risk factors: 1) endocrine disorders and systemic diseases (diseases of the thyroid and parathyroid glands, rickets, syphilis, tuberculosis, beriberi), 2) phylogenetic factors (reduction of jaw bones with preservation and stable number of teeth their size) , and 3) local factors (delay or premature loss of a baby tooth, the convergence of crowns to adjacent teeth dentition defect, curvature of the tooth root , deep location of the tooth bud in the thickness of the alveolar ridge, tsementomy, follicular cysts, neoplastic processes, permanent intoxication rudiment tooth). [3].

Most authors are of the opinion that the provisions of anomalies and violating the terms of dentition lead to morphological, functional and aesthetic violations maxillofacial region are reflected in the activities of other organs and body systems. The main reason they believe the wrong tab, shift and delay premature removal of deciduous teeth, congenital disorders of the maxillofacial region, the presence of supernumerary teeth, inflammatory and traumatic lesions of the jaws [4]. Almost 98% of the supernumerary teeth cause deviations in the usefulness of the development and function of the oral cavity. Among the disorders caused by supernumerary teeth in 84 % of cases they cause the formation of anomalies dentition. The remaining 16% of cases - inflammatory and degenerative changes in the surrounding tissues . This is manifested in chronic gingivitis supernumerary teeth, changes in periodontal complete teeth lead to a uniform
or non-uniform expansion. The optimal treatment for dental system anomalies caused by supernumerary teeth is a hardware-surgical method [2].

Among the anomalies terms dentition is more common unilateral retention medial incisors and canines in the upper jaw, the second premolars in the lower jaw. Clinical observations described bilateral retention. According to G.V. Stepanov (2000), A.A. Nedbay (2003); Mazen Shook (2004) from 4% to 18% of patients treated for orthodontic and surgical help for this disease. Complexity of diagnosis and treatment prognosis of this disease is often caused by unfavorable conditions morphological location and displacement of the tooth, which determines the need to find new ways to solve this problem [4].

By anomaly values teeth are so-called giant teeth (makrodentia). Most often it is the upper central or lateral incisors, which need a lot of space, so the other teeth, and sometimes they can not properly situated in the dentition and an obstacle to the eruption of the adjacent teeth, causing crowding them. There are teeth and disproportionately small bits having the correct form (mikrodentia), which are usually located with large gaps and violate its kind facial harmony. Transposition of teeth - is their position at which the teeth are reversed.

Causes of disease are atypical location of primordia, trauma, inflammatory processes in the jaws. Individual researchers, reduced number of teeth, regarded as the reduction of dental system in modern man and its adaptation to new functional requirements. More authors, reduced number of teeth associated with impaired rudiments or death during embryonic development, which may contribute to his mother’s illness, as well as state parafunction individual organs or systems during pregnancy [1].

Nowadays more and more importance is given to genetically determined information leading to congenital malformations of the teeth primordia. Depending on the severity, they may manifest as violations of the shape, size, structure of hard dental tissues, the lack of individual or groups of teeth and a complete lack of teeth, with both temporary and permanent. View edentulous when no rudiments of teeth, called "true edentia". Clinically tooth rows defined dental defects of varying lengths, which can be combined with the shape of the teeth abnormalities. When orthopantomography found that edentulous maxilla bone structure is broken (especially pronounced in mounds), alveolar bone is underdeveloped or absent. Vertical dimensions of the mandibular body drastically reduced due to the underdevelopment of the alveolar process [2].

But we observed a rare case of a combination of all the above malformations dental system in a patient 16 years of age, whose parents have complained to the periodic discharge of pus in the area of the tooth on the upper left jaw of the child. Objectively: visual inspection - without pathology, 22 tooth missing, midline shift - the width of the left central incisor. 12 tooth had subulate form mucous alveolar bone in the top of the projection 12 hyperemic, determined mouth fistula with scant purulent hemorrhagic discharge. Palpation and percussion in the area of tooth 12 - painless. To confirm the diagnosis, determine a treatment plan, the patient is directed to perform orthopantomography. The panoramic radiography revealed bone loss round shape in "root" in the 12 d to 1.5 cm, the coronal part of the tooth has stood in the hole, the shape of it corresponded premolar, the upper third of the root of tooth 13 was rejected by 250 from the axis out the rudiments of 22, 28, 48 teeth. Was diagnosed with follicular cyst 12, 12 transposition, primary gypodentia, primary edentia 22, 28, 48 teeth. In history - primary edentia teeth of father.

The treatment plan consisted of surgical parts (removal of tooth 12 with cystectomy), orthopedic - manufacturing mediatory orthopedic prosthesis, orthodontic - hardware method of restoring the integrity of the dentition after a full osteogenesis in the area of the missing 12. We performed the surgical part of the treatment: against antibiotic (Vampiloks 500 1 tab. 2 x p. per day 5 days)
remove 12 cystectomy with all its shells, washed the wound with an antiseptic solution, made of loosely iodoform turundas, haemostasis. "Square" of 12 had a form of remote premolar with two apical openings. Nurofen tablets assigned once in pain. On the third day iodoform turunds removed, the wound made sponge "Alvostaz» № 1. On the sixth day - a sponge in the wound kept wound epithelialized. The patient is directed to the orthopedist for the mediatory dental prosthesis manufacturing followed by treatment orthodontist.

In analyzing this case, it should be noted that, although clinicians have long been familiar with the described abnormalities, the possibility of early diagnosis, prevention and treatment of these conditions is always rather limited and treatment strategy in each case is determined by the number and type of missing teeth, the individual proportions of the skeleton and aesthetic considerations [6]. Therefore, early diagnosis is mentioned anomalies, in our opinion, is not only medical but also social. Child dentist receiving necessary to educate parents attitude towards culture of oral health of the child, which further helps the family avoid not only aesthetic, psychological problems, especially in puberty teenager, but his parents’ investments.

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