



TREATMENT AND PREVALENCE OF ABNORMAL ERUPTION OF PERMANENT CANINES

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Annotatsiya:

The article outlines the foundations of the diagnosis, prognosis of treatment and the prevalence of abnormal eruption of permanent canines. The author presented a broad review of the literature of both foreign and domestic scientists, detailed the course and prevalence of this pathology. Various methods for assessing X-ray examinations and modern approaches to diagnostics and treatment planning for retention of the upper permanent canines, which are necessary in practice at an orthodontist, are also described.

Keywords.

Dental anomalies, canine retention, orthopantomography, spiral cone-beam computed tomography.



In the works of authors dealing with retention issues, this condition occurs in 4 to 18% of cases among patients who have sought orthodontic care. A retentive tooth (from Latin-retention, containment) is a tooth that will not be able to erupt properly, since it is completely or partially covered by bone or thick gum tissue. A domestic researchers in their clinical and experimental study, among 6037 patients who sought orthodontic care, identified 217 patients with retention, which was 3.59%. At the same time, the most common were retentive canines - 52.9 %; central incisors - 38.5% of cases. In most cases, the presence of a retented canine in the thickness of the bone tissue does not cause any clinical manifestations. Retented teeth are very often found accidentally during an X-ray examination of the jaw for some reason. Objective signs of retention are the absence of the corresponding tooth, the incorrect position of adjacent teeth in the dentition, the presence of bone protrusion on the outer or inner surface of the body or the alveolar process of the upper jaw, neuralgic pain, a feeling of paresthesia in the teeth or lips, in the absence of diseased teeth and other pathological conditions in the corresponding part of the jaw. The majority of domestic and foreign researchers point out that the use of the entire range of modern diagnostic measures with their subsequent thorough analysis contributes to the correct diagnosis and a more predictable course and results of treatment of any anomalies, including anomalies of the timing of eruption (retention) of canines. The classical scheme of examination of orthodontic patients with canine retention is a clinical examination, antropometric methods of examination of the face, plaster models of the jaws, graphic methods, functional, rengenological methods of examination. However, the retention of canines with a high degree of probability can be established according to the data obtained from the X-ray examination of the segment of the alveolar process or the jaws.

A number of authors strongly recommend conducting intraoral close-focus radiographs, panoramic images of the jaws in one or more projections to clarify the localization of the retented tooth, the state of its roots and the roots of neighboring teeth, as well as to determine the state of

the periapical tissues. Modern authors recommend using spiral computed tomography, as the most informative to date. The authors attribute the high reliability of the study to the ability to obtain an image of any anatomical formations in a cross-section from 1 to 10 mm, followed by modeling of dimensional reconstructions, and to instantly display the image on the screen without linear or angular distortions. Computed tomography in dentistry has significantly increased the possibilities of diagnosis, thanks to the accuracy of the image, it is possible to get an objective idea of the clinical situation and choose the most accurate and controlled treatment plan.

The diagnostic significance of computed tomography is so great, because during the examination it is possible to obtain images of intravital sections with a thickness of 1 mm of any tissue structures. The basis of the technique consists in layer-by-layer X-ray transmission of the object of study in several directions along the movement of the emitter (X-ray tube). The sensors register the non-absorbed part of the rays, after which the signal from them is received and processed by the computer computer system. Then all the data received from the source is displayed as an image of the studied structure on the screen. Thus, computed tomography allows you to study and simulate structures in any plane without overlaying other images in real time without surgical intervention. A group of Russian researchers has proposed an optimal method for determining the area and size of the elements of the dentoalveolar system, which is based on the data of orthopantomography and computed tomography. The technique consists in studying an orthopantomogram and a computed tomogram in Photoshop through a scale grid with the specified parameters.

When the image is enlarged, the grid is enlarged to take into account the image, which allows you to measure any parameters in the images quite accurately. This technique allows for a comparative analysis of images obtained from patients at different times and to track the dynamics of changes without linear and angular distortions. This experience has shown that at the present stage of development and integration of medicine and higher mathematics, it has become possible to implement joint achievements in practical dentistry. This makes further research in this direction promising. Based on the variety of etiological factors that lead to retention of the upper permanent canines, we can conclude that it is necessary to dynamically monitor and conduct regular preventive examinations for the eruption of these teeth in children, starting with the period of replacement bite. The most modern of the currently available is spiral cone-beam computed tomography, which combines the acquisition of a large volume of diagnostic data with low radiation exposure to the patient. The literature describes various methods of evaluating X-ray studies for the purpose of diagnosing and planning treatment of retention of the upper permanent canines, but there are no works related to the X-ray assessment of the dental system of children during the period of replacement bite in order to prevent the formation of retention of canines. And still, we have no right to judge and insist on using this or that technique for X-ray studies, because much depends on the economic development of a particular region. Also, not a little depends on the orthodontist, namely in the ability to read the information received by a particular resource.