



## 25. ETIOLOGY OF TEETH ERUPTION DISTURBANCES

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**Introduction.** Tooth eruption is a complex process during which teeth, initially positioned intraosseously, move along the alveolar process to the oral cavity, establishing contacts with the antagonists. Any deviation from the physiological pattern of tooth eruption signifies a disturbance of this process. Chronological changes of tooth eruption are represented by early eruption, delayed eruption and tooth impaction. All these disturbances can negatively influence the harmonious development of the craniofacial complex.

**Aim of study.** This study aims to carry out a literature review and to identify the etiological factors contributing to the occurrence of dental eruption disturbances.

**Methods and materials.** The analysis of 20 scientific articles on the PubMed and Google Scholar platforms was carried out using the keywords "early tooth eruption", "delayed tooth eruption", "tooth impaction".

**Results.** The analysis highlighted the multifactorial nature of the tooth eruption etiology. Early tooth eruption is usually caused by general factors such as endocrine disorders like hyperthyroidism and juvenile acromegaly, congenital syphilis, exposure to toxic compounds such as dibenzofuran or the hereditary factor which favors the superficial position of the tooth bud. Endocrine disorders are also the cause of delayed eruption. The most common are hypothyroidism which affects 1/5000 children, hypoparathyroidism, hypogonadism. Genetic causes of delayed eruption are Down syndrome, ectodermal dysplasia, Apert syndrome. Tooth eruption can be delayed in malnutrition especially associated with hypovitaminosis D and A. The administration of certain medications, such as acetylsalicylic acid, ibuprofen disrupts osteoclastic activity by inhibiting the activity of prostaglandins, which later leads to delayed eruption. General factors, as a rule, affect the eruption time for the majority of teeth or all of them while local factors affect the eruption of a single tooth or a small group of teeth. The main local factor that causes delayed eruption or tooth impaction is represented by physical obstruction which is the presence of an obstacle in the path of tooth eruption. The obstacle can be a supernumerary tooth such as mesiodens, odontogenic or nonodontogenic tumors, odontogenic cysts, gingival hyperplasia, mucosal barriers, the presence of scars following trauma or surgical interventions, ankylosis. Another local factor is the lack of space necessary for tooth eruption or its reduction, caused by the migration of neighboring teeth, macrodontia, transverse narrowing of the jaws.

**Conclusion.** Both general and local factors are involved in the etiology of dental eruption disturbances. In the case of early eruption, general factors prevail, while in delayed eruption both factors play a great role. Dental impaction, in most cases, is caused by local factors. Knowing the factors that can cause disturbances in the tooth eruption process enables their early detection and the initiation of appropriate treatment, thus preventing further complications.