

Management of Eruption Disturbances

Prof. Ki Taeg Jang

Teeth gradually move three-dimensionally within the alveolar bone as they develop and erupt. Until tooth crown formation is complete, there is minimal rotational movement during the pre-eruption stage. After crown formation is complete and root formation begins, the tooth undergoes rapid bone movement towards the dental arch, passes through the alveolar bone, and erupts into the oral cavity after penetrating the mucosa. The time of tooth eruption into the oral cavity varies depending on the tooth, but it typically occurs when the root is about 1/2 to 3/4 complete. Once a tooth erupts into the oral cavity, it initially moves at a rapid speed, but as it approaches the occlusal plane, the rate of eruption decreases rapidly. However, tooth eruption continues gradually even after reaching the occlusal plane, which compensates for occlusal wear and maintains the vertical dimension of the oral cavity. If contact with the opposing tooth is lost, the rate of eruption will increase again.

During the mixed dentition period when deciduous teeth are replaced by permanent teeth, eruption disturbances are often observed. Impacted teeth, in the pathological sense, refer to teeth that remain unerupted and buried within the oral mucosa or alveolar bone even after the expected eruption time has passed. Clinically, impacted teeth also include teeth that are expected to fail to erupt even at the normal eruption time, based on their shape, location, direction, and eruption space. Failure of teeth to erupt normally and in the correct order can cause various problems, including esthetic issues such as space loss due to the inclination of adjacent teeth and deviation of the midline, displacement and resorption of adjacent teeth, loss of the length of the dental arch resulting in malocclusion, the development of cyst, infection, and related pain.

I will discuss on cases related to the management of eruption disturbances in children and adolescent.

Profile

- * Professor, Dept. of Pediatric Dentistry, Seoul National University Dental Hospital
- * Former President, Korean Academy of Pediatric Dentistry