Tooth development and eruption. Prevalence of agenesis and tooth developmental deviations

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Research background, material and methods:

Tooth development. Three tissue types (a-c) are important for development of the primary and the permanent teeth.

a. Nerve tissue in the root membrane and periodontal membrane (PA)
b. Epithelium in the crown follicle and PA
c. Ectomesenchyme surrounding the tooth bud and in PA

Tooth eruption. Eruption process is explained from these three tissue types.
Nerve tissue (a) creates pressure (lifting the tooth out of the alveolus)
Epithelium (b). Perforations in the crown follicle cause migration of mononuclear resorbing cells from the inside of the follicle to the outside, where these cells resorb the overlying bone, ectomesenchyme.
Ectomesenchyme (c) creates the eruption path.
All tissue types interact in PA during the sliding movement.

Agenesis. The three tissue types contribute to divide the agenesis in types with different etiological backgrounds. These will be demonstrated on orthopantomograms, as single agenesis, agenesis shattered in different locations of the dentition or in several agenesis occurring within the same field (region) Also dysplasia resulting in agenesis will be demonstrated

Other dental deviations. Different types of dental deviations with different etiologies will be demonstrated. The importance for diagnosing dental deviations will be highlighted.

References

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