

Image Article

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Odontogenesis Tooth Development

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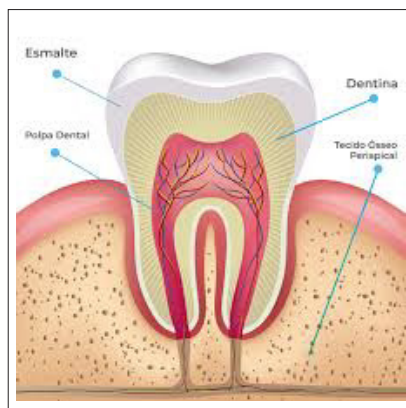
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Received: July 17, 2023; Accepted: July 21, 2023; Published: July 30, 2023

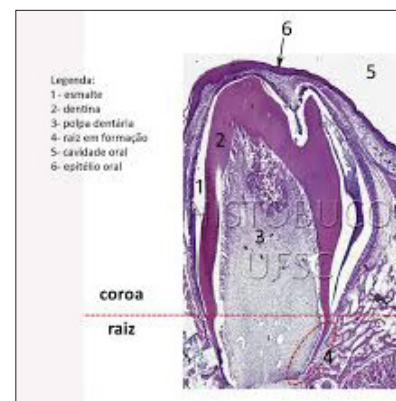
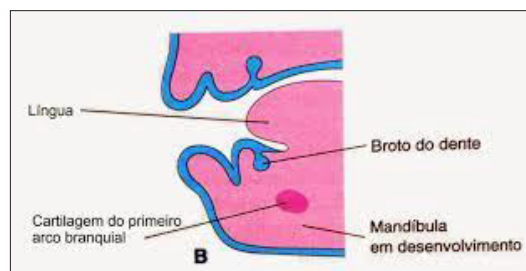
Introduction

- Period when teeth are formed, within the bone: maxilla and mandible
- Deposition of dentin and enamel and formation of the crown of the future tooth



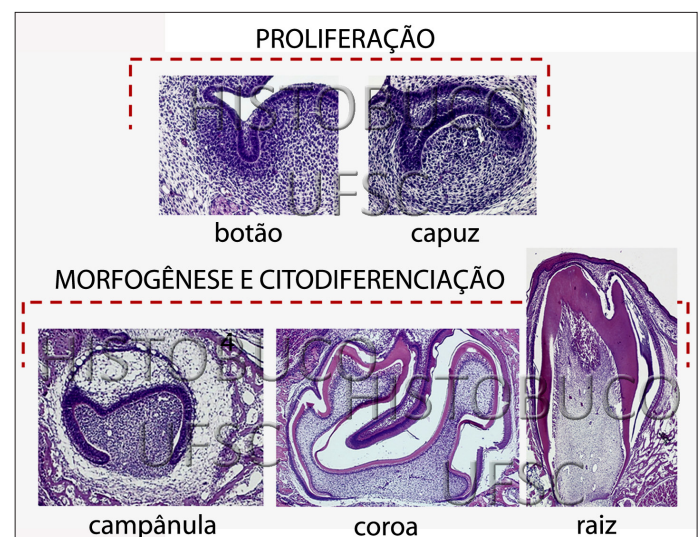
Beginning of Dentistry

- Primary teeth: gestation – 5th - 6th week of intrauterine life (VIU)
- Permanent teeth: the child's first year of life
- During VIU, ectomesenchyme is formed (embryonic tissue that gives origin to tooth structure: enamel, dentin, pulp and periodontal tissues), interacts with the oral epithelium to initiate odontogenesis



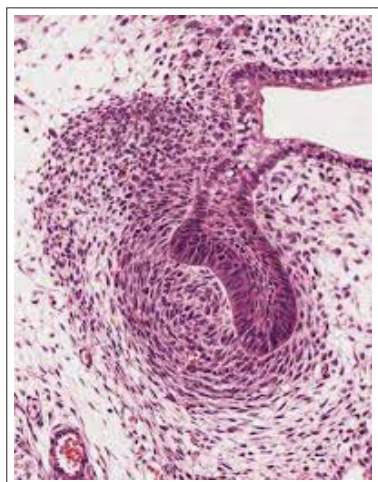
Stages of Dentistry

- The progressive and continuous modification of the tooth germ is characterized by 5 stages respectively:
 - This sequence of images correspond to cross-sectional histological sections
1. Button,
 2. Hood or Cap,
 3. Bell or Bell,
 4. Coronogenesis,
 5. Rhizogenesis.



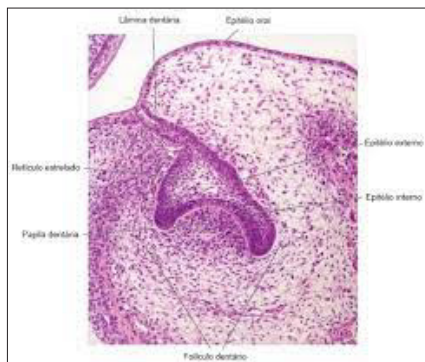
1 - Button Phase

- Invagination of the oral epithelium towards the ectomesenchyme
- Condensation of the ectomesenchyme



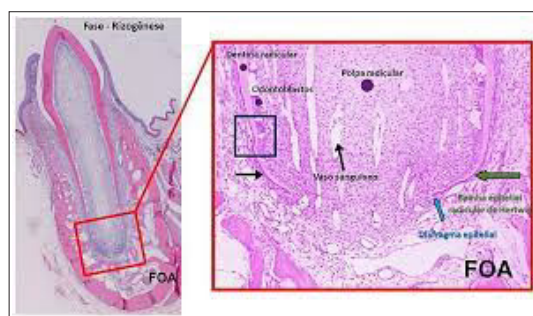
2 - Hood or Casquete Phase

- Proliferation of epithelial cells leaving the tooth germ with the shape of a hood
- Formation of enamel



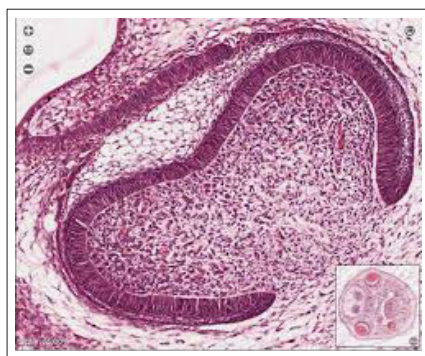
5 - Rhizogenesis Phase

- Starts from the Epithelial Sheath of Hertwig and progresses in an apical direction
- This epithelial sheath that will command root formation and is responsible for guide the development of supporting tissues: cementum, ligament periodontal and alveolar bone



3 - Bell or Bell Phase

- The enamel organ has a bell-like appearance and surrounds the dental papilla
- From that moment on, the dental papilla becomes the dental pulp



References

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4 - Coronogenesis Phase

- Deposition of dentin and enamel and formation of the crown of the future tooth

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