



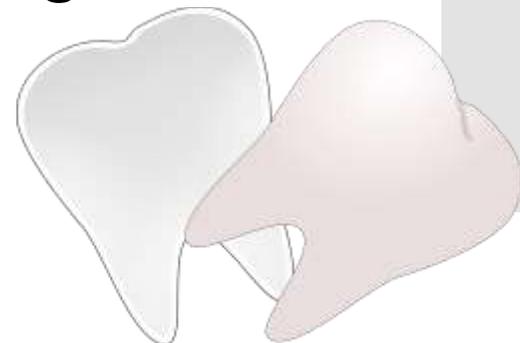
Dens in Dente & Dilaceration

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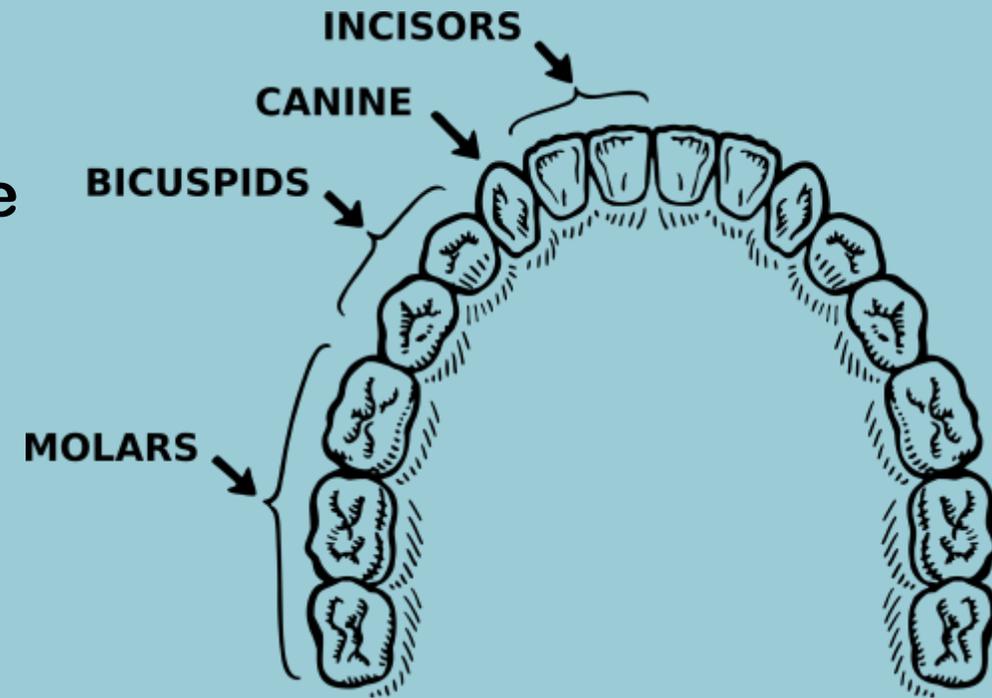
Common Developmental Abnormalities of the Teeth

- Abnormalities in the clinical crown of erupted teeth can be determined by clinical examination
- Changes to the clinical root or unerupted teeth can only be interpreted through radiographs
 - The only diagnostic aid
- Abnormalities occur by altering the:
 - Number of teeth
 - Shape
 - Internal architecture
- Dens in dente and dilaceration are changes to the tooth's shape



Dens in Dente/ Dens Invaginatus

- It is *not* a tooth within a tooth.
- It is an invagination, turning inward, of the calcified layers into the body of the tooth.
- In other words, as the tooth was forming, the layers turned inward and continue to grow in that manner.
- Occurs most often on the maxillary lateral incisor

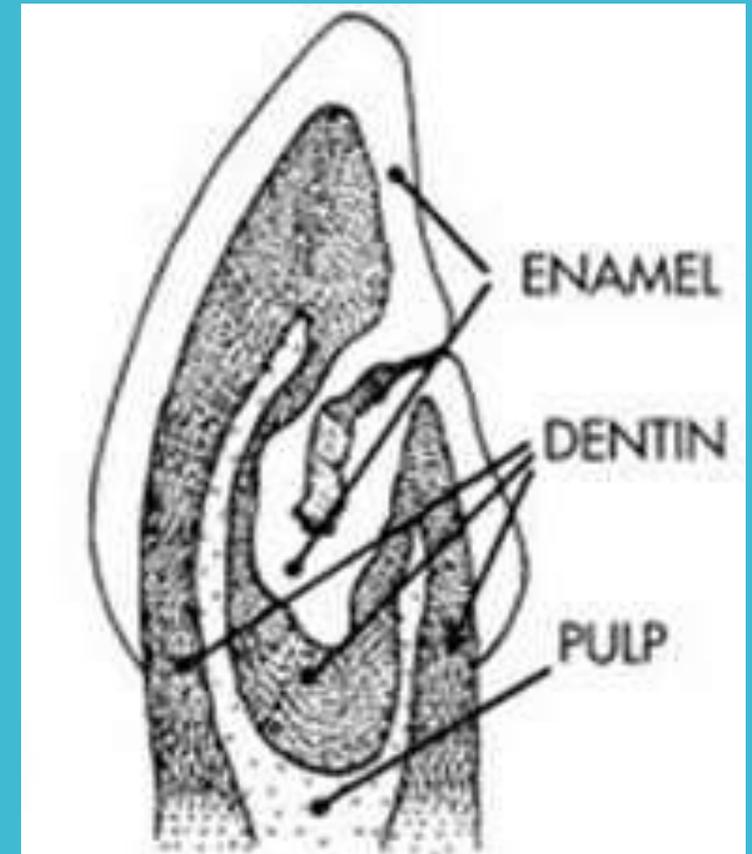


Enamel: the densest structure found in the human body; the outermost radiopaque layer of the crown of the tooth.

Dentin: the tooth layer found beneath the enamel and surrounding the pulp cavity: appears radiopaque.

Pulp cavity: a cavity within the tooth that includes both the pulp chamber and the pulp canals; contains blood vessels, nerves and lymphatics; appears radiolucent

This picture depicts how the enamel layer was invaginated. Instead of calcifying outward, it turned and is growing inward towards the pulp cavity.

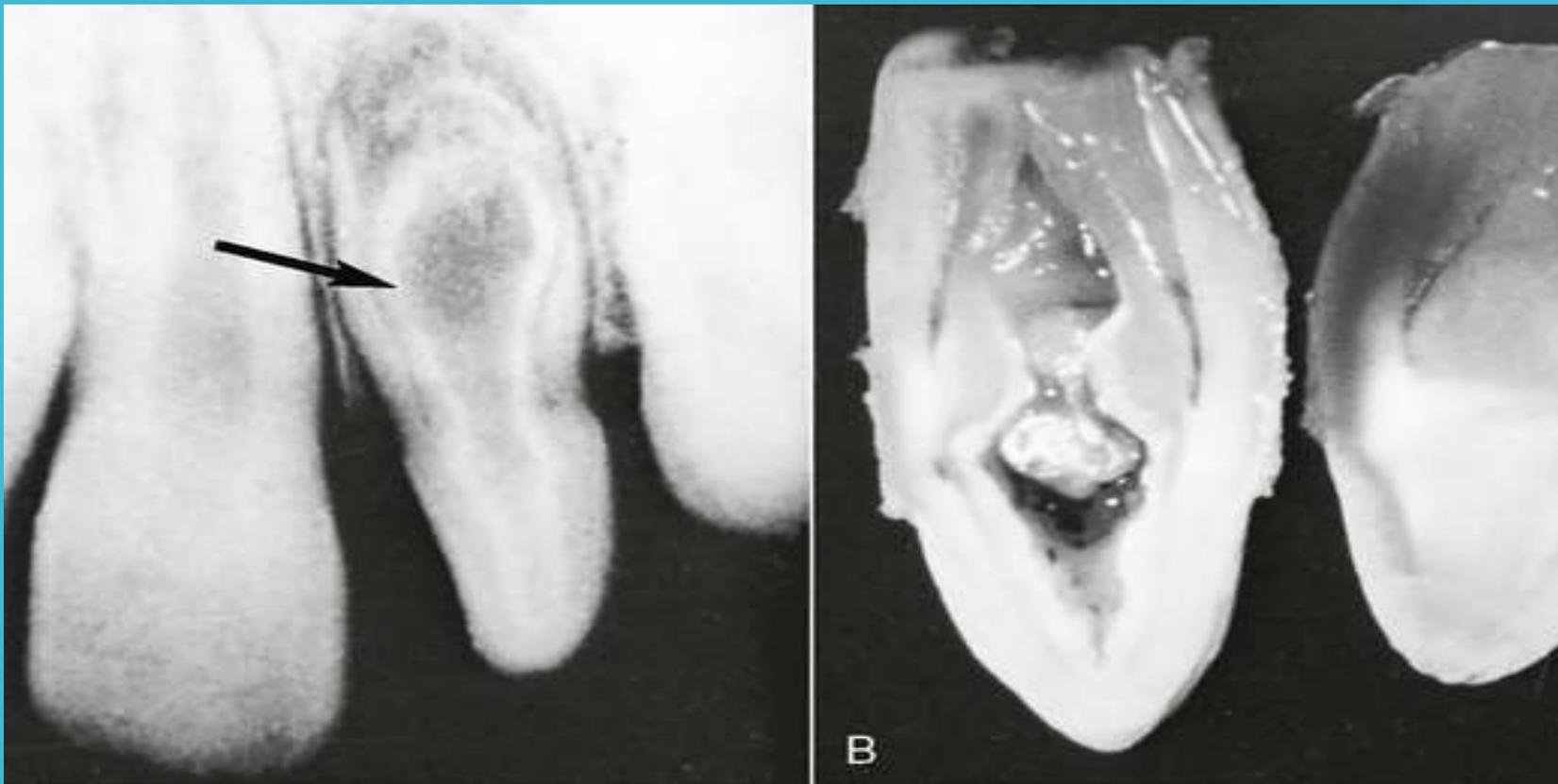


There are varying degrees of invagination.

- **Type I, enamel invagination on the crown**
- **Type II, enamel-lined form that invades the root as a blind sac, may intervene with the pulp cavity**
- **Type III, extends beyond the cementoenamel junction**

This central periapical radiograph depicts two enamel-line invagination (Type II).

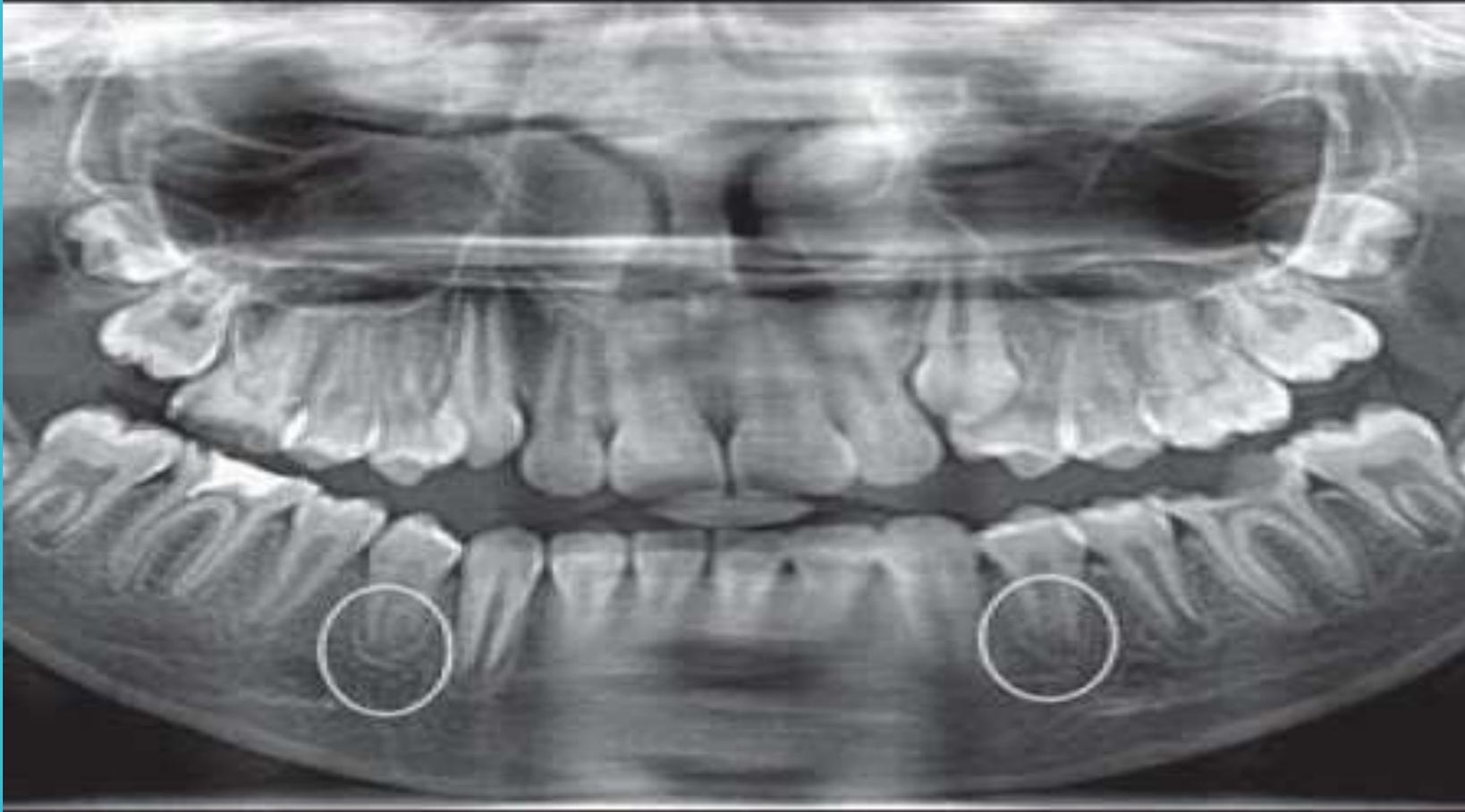




These images juxtaposed how dens in dente would appear radiographically and clinically.

Dens in dente can occur on the crown as seen in the premolars of this periapical radiograph.

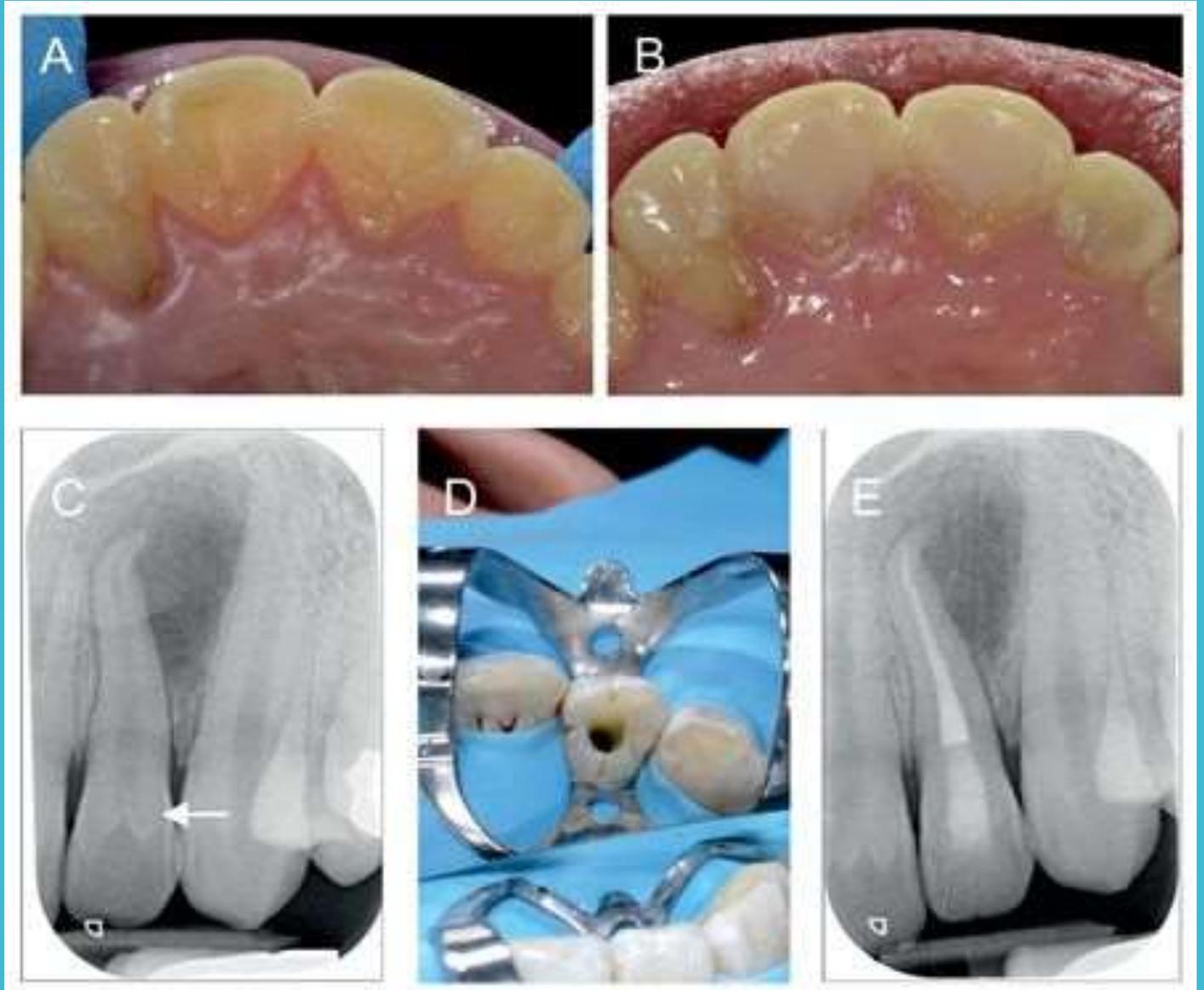




Dens invaginatus can also occur in the roots of teeth as shown in the mandibular premolars of this panoramic.

Often, these teeth become necrotic and may form a cyst in the periapical region appearing radiolucent. Ultimately, endodontic therapy is required.

- A. Before treatment
- B. Post treatment
- C. Radiograph before treatment
- D. During treatment
- E. Radiograph post treatment



Dilaceration

- Distortion of the usual relationship between the root and the crown
- In other words, there is an angulation or a sharp bend/curve in the root or crown
- There are varying degrees of angulation.
- This occurs due to trauma or crowding of the teeth.





Dilaceration can occur on any teeth as seen in these two radiographs; it can be on the incisors and molars.



It can form in all shapes and sizes.



Even a slight sharp bend can be considered as dilaceration.



In this panoramic, trauma from impacted mandibular second premolar may have caused dilaceration.

References

- Pradeep, K., Charlie, M., Kuttappa, M. A., & Rao, P. K. (2012). Conservative Management of Type III Dens in Dente Using Cone Beam Computed Tomography. *Journal of clinical imaging science*, 2, 51. doi:10.4103/2156-7514.100372
- Iannucci, J. M., & Howerton, L. J. (2017). *Dental Radiography: Principles and Techniques* (5th ed.). St. Louis, MO: Elsevier/Saunders.

