

Pericoronal Radiolucencies

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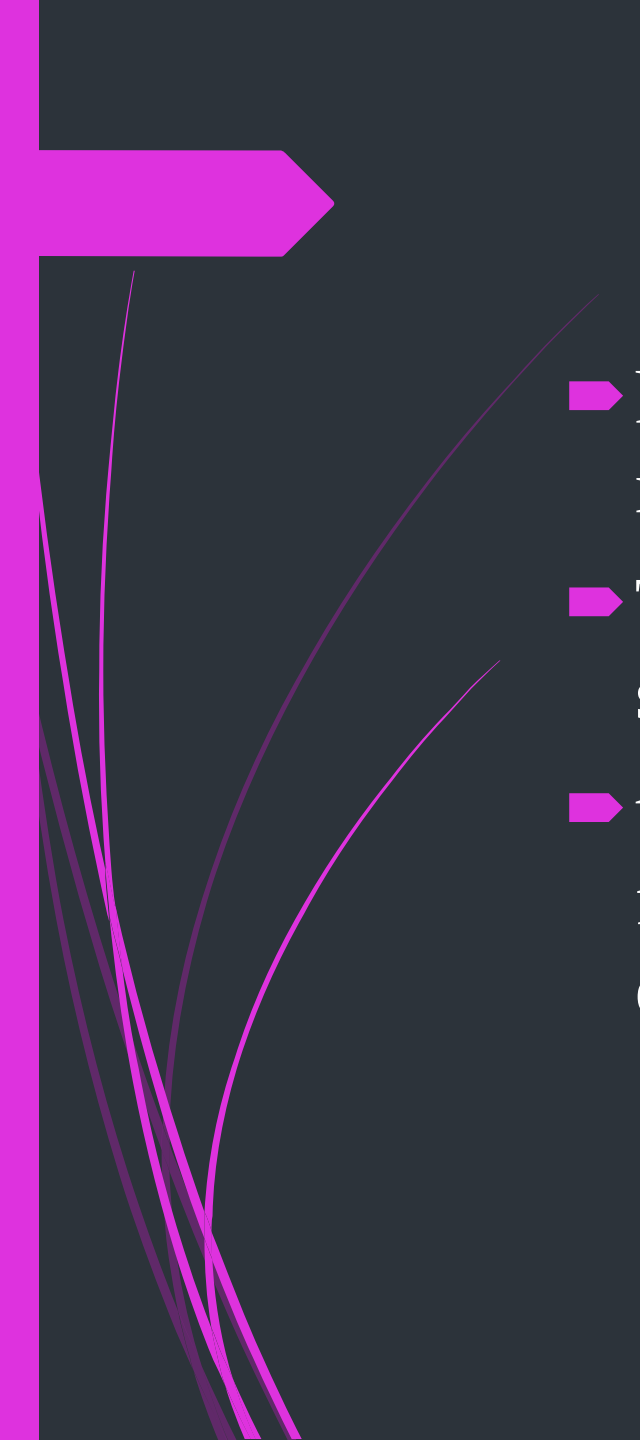
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PERICORONAL OR FOLLICULAR SPACE

- The crowns of unerupted teeth are normally surrounded by a dental follicle-a soft tissue remnant of the enamel organ that is frequently referred to as the *reduced enamel epithelium*
- It is important to distinguish between dental follicle and odontogenic tumors microscopically.

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- ▶ homogeneous radiolucent halo with a thin outer radiopaque border
 - ▶ Teeth that have been impacted for some years frequently show a smaller pericoronal space
 - ▶ the unerupted maxillary canines frequently have enlarged follicular spaces, especially when their eruption has been delayed



guidelines have to distinguish between a normal and an abnormal follicle:

- 1. When an asymptomatic follicular radiolucency becomes approximately 2.5 cm in diameter and the surrounding cortical plate is poorly defined, disease is strongly suggested.
- 2. If the pericoronal space reaches 2.5 mm in width on the radiograph, this is presumptive evidence that fluid is collecting within the follicle and pathosis is present in 80% of cases



Management

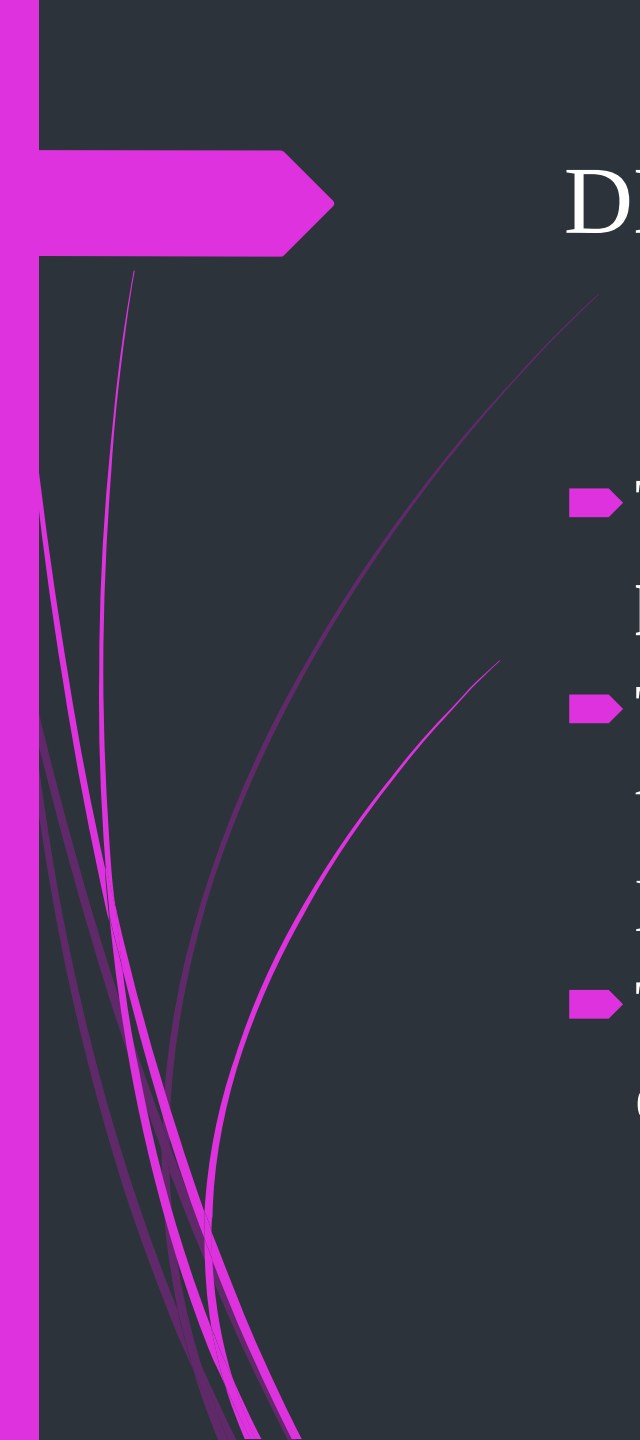
- In the absence of clinical symptoms, it is advisable to radiographically examine equivocally enlarged or enlarging follicles at least every 6 months or until it becomes apparent that eruption is being delayed, the tooth is being displaced, or the tooth erupts.

A



B

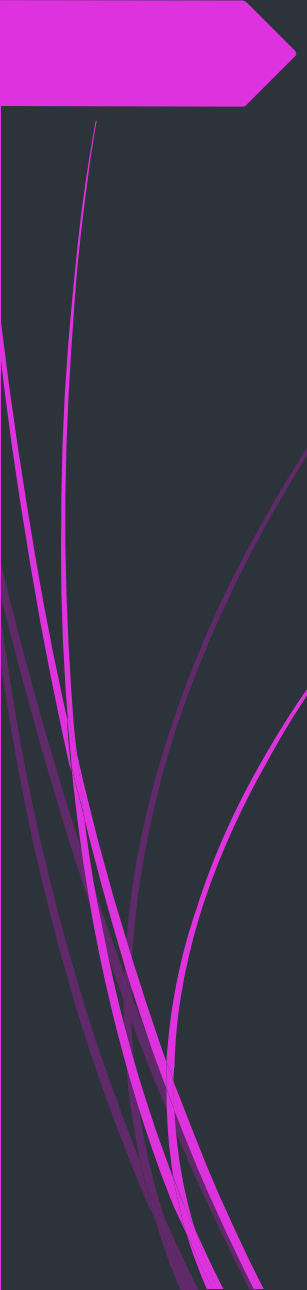




DENTIGEROUS (FOLLICULAR) CYST

- The dentigerous cyst is **the most common pathologic pericoronal** radiolucency
- The teeth most frequently affected are the mandibular third molars, the maxillary canines, the mandibular premolars, and the maxillary third molars
- The highest incidence occurs during the second and third decades of life

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- If multiple dentigerous cysts are found, the patient should be examined for multiple basal cell nevus syndrome or cleidocranial dysplasia.
 - The cysts vary greatly in size, from less than 2 cm in diameter to massive expansions of the jaws.
 - The expansion may in turn produce gross deformity of the region involved

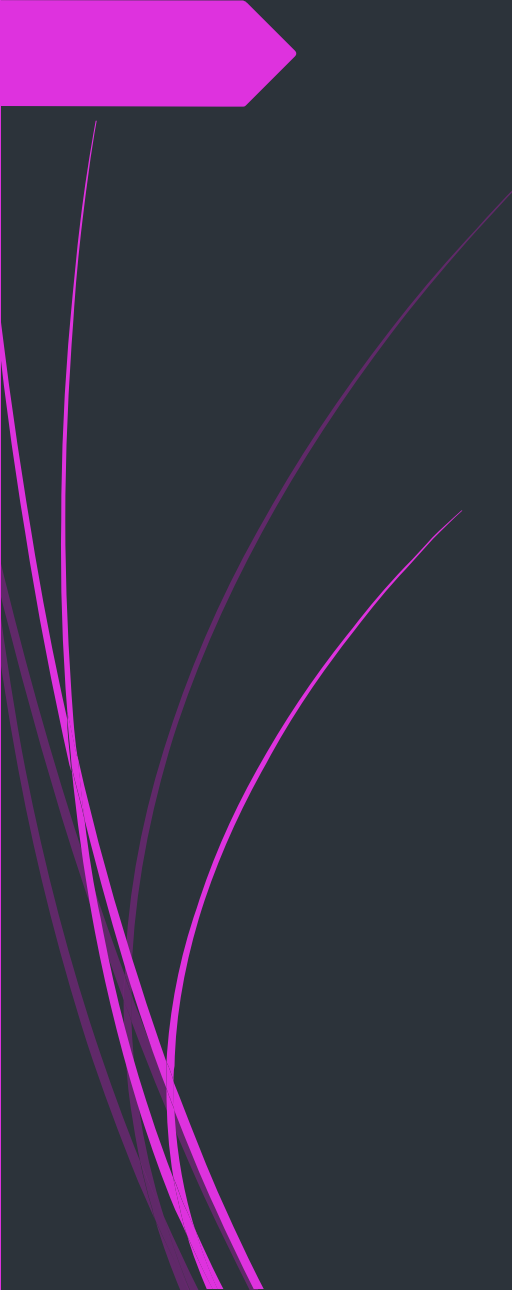
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- Although a slowly expanding cyst may markedly thin the cortical plates, it seldom erodes them. When the cortical plates are eroded, palpation reveals a rubbery, fluctuant, nonemptiable mass
 - Dentigerous cysts cause resorption of adjacent tooth roots in 55% of cases
 - Aspiration often yields a straw-colored, thin liquid. Cholesterol crystals may be seen in the aspirate when the syringe is slowly rotated in front of a strong light.



Management

- Complete enucleation must be accomplished; enucleation reduces the possibility of potentially dangerous cells remaining in the region after surgery to form residual cysts, ameloblastomas, or other lesions

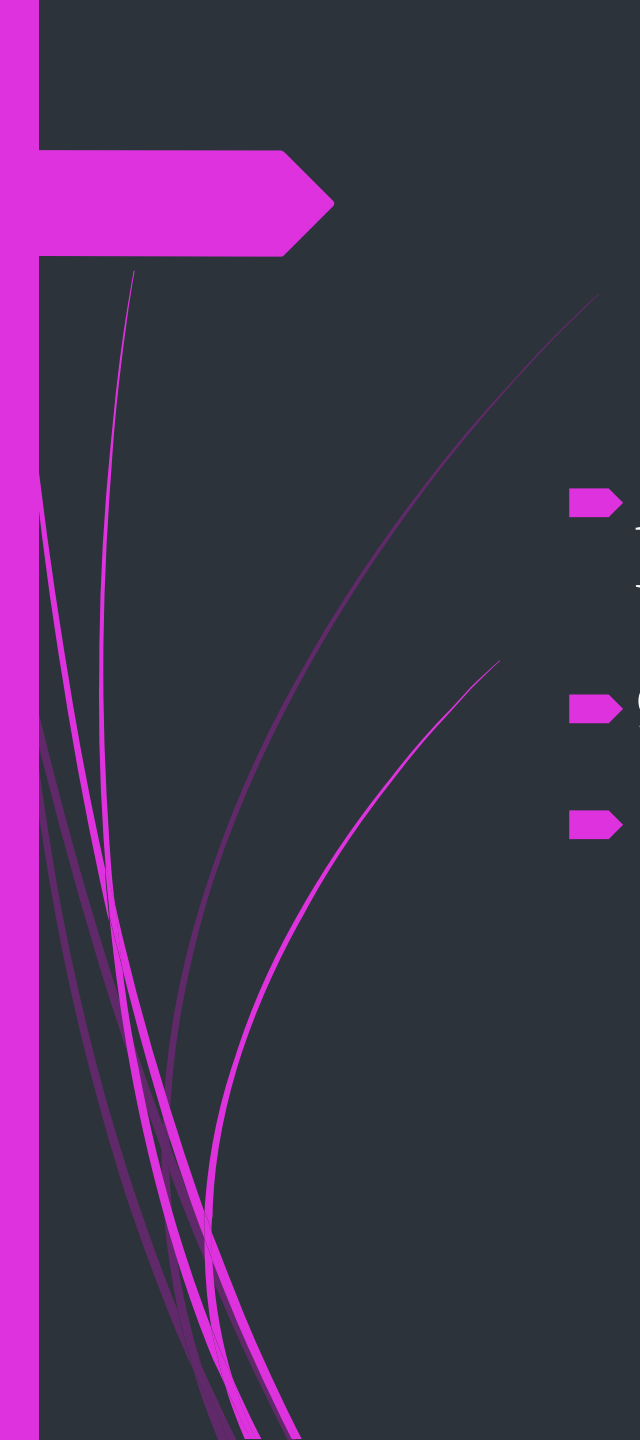


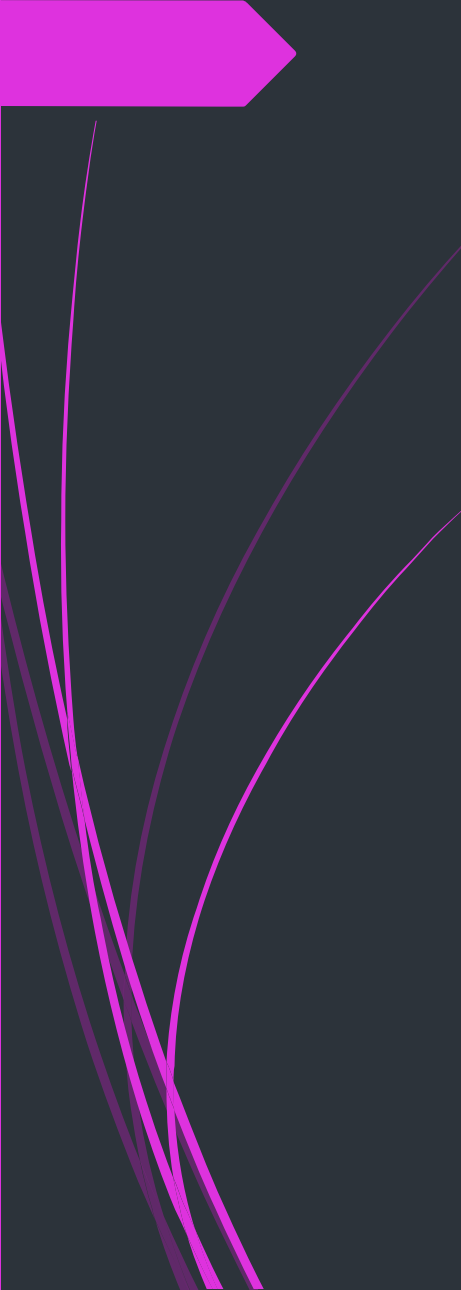


ADENOMATOID ODONTOGENIC TUMOR (ADENOAMELOBLASTOMA)

- Uncommon, benign, and noninvasive
- Most AOTs are follicular, but some are extrafollicular
- Slow-growing tumor that does not infiltrate bone.

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- These tumors are inclined to displace teeth rather than cause root resorption
 - Twice as common in women
 - Usually occurs in the second decade of life; the average age at occurrence is 17 years

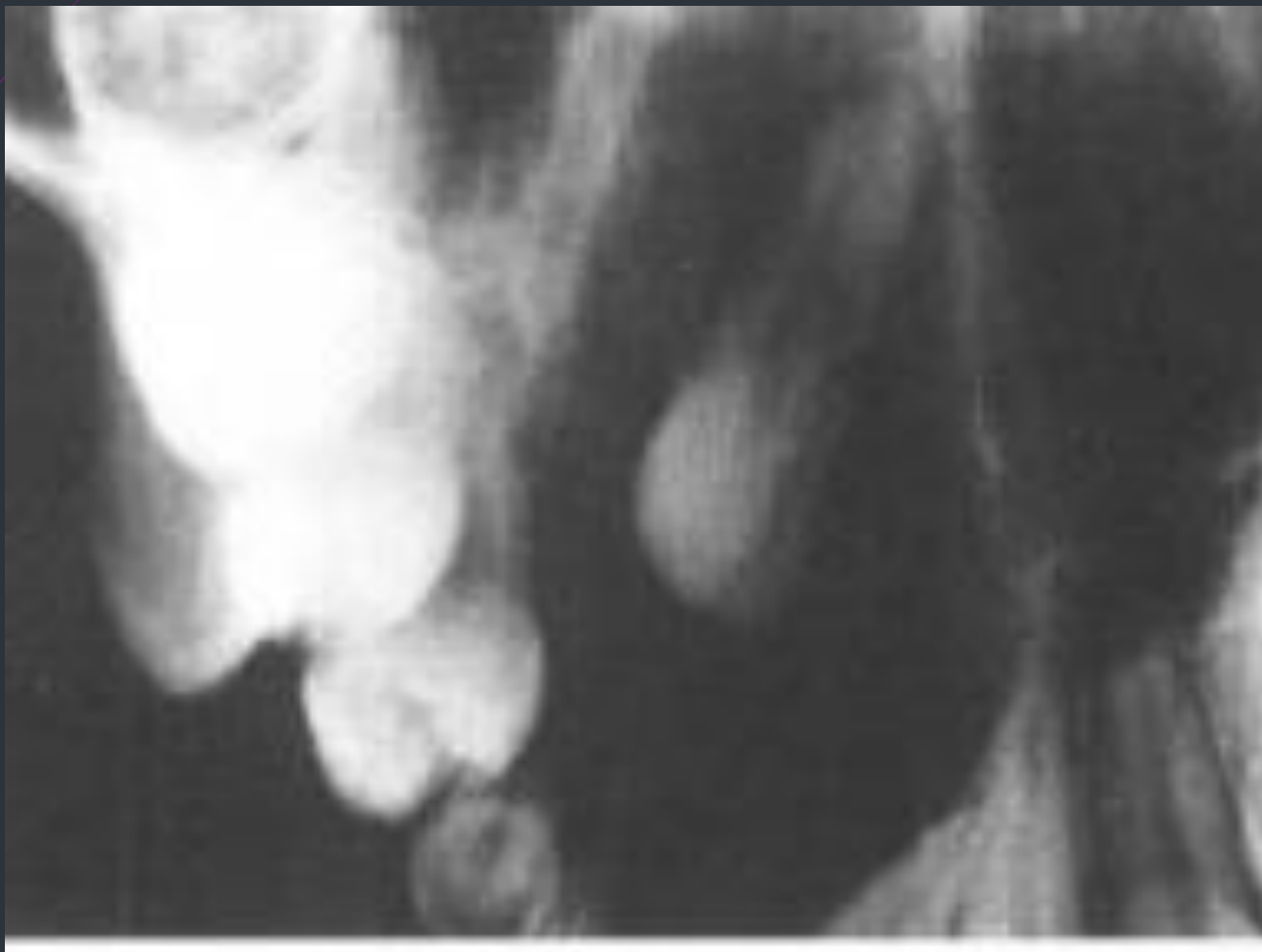
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- At least 73% of these tumors occur in association with unerupted teeth or in the walls of dentigerous cysts
 - 90% have occurred in the anterior portions of the jaws
 - more frequent in the maxilla than in the mandible

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- Unerupted teeth frequently associated with this tumor (in order of frequency) are the maxillary canine, Lateral incisor, and mandibular premolar
 - Small calcifications within the tumor are not seen on radiographs. so the lesion is completely radiolucent and mimics a dentigerous cyst in growth pattern and appearance
 - Continued slow growth may expand the cortical plates and produce a clinical swelling and asymmetry, **but invasion of the soft tissue does not occur**



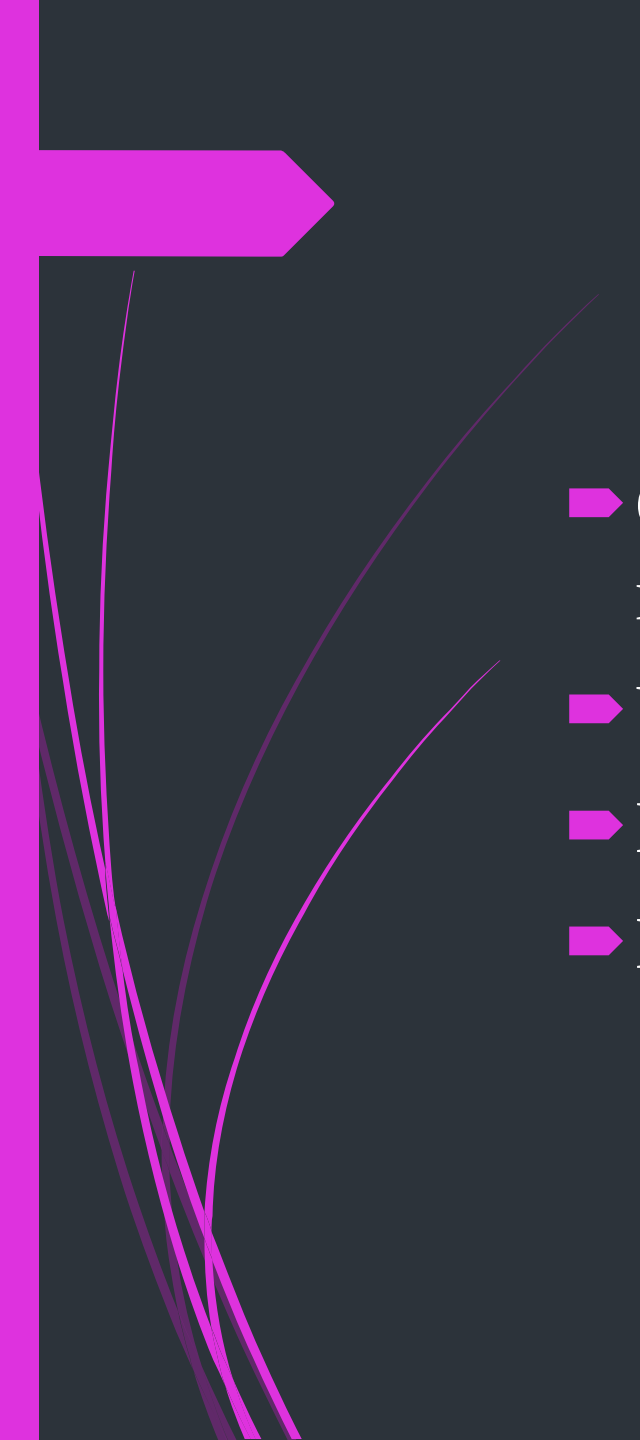
Management

- The AOT is best treated by enucleation, since it separates easily and cleanly from its bony defect and does not show a tendency to recur



AMELOBLASTIC FIBROMA

- True mixed odontogenic tumor, containing nests and strands of odontogenic and ameloblastic epithelium in a primitive
- The ameloblastic fibroma is not as frequently associated with an unerupted tooth as the AOT, although both are usually found in the same age-group (under 20 years of age).
- Does not demonstrate a predilection for either gender.
- The majority occur in the mandible, and the highest incidence is in the premolar and molar region.

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- Grows slowly by expansion of the cortex and usually does not invade bone.
 - Usually seen as a pericoronal radiolucency
 - May appear unilocular or multilocular.
 - Not associated with an unerupted tooth



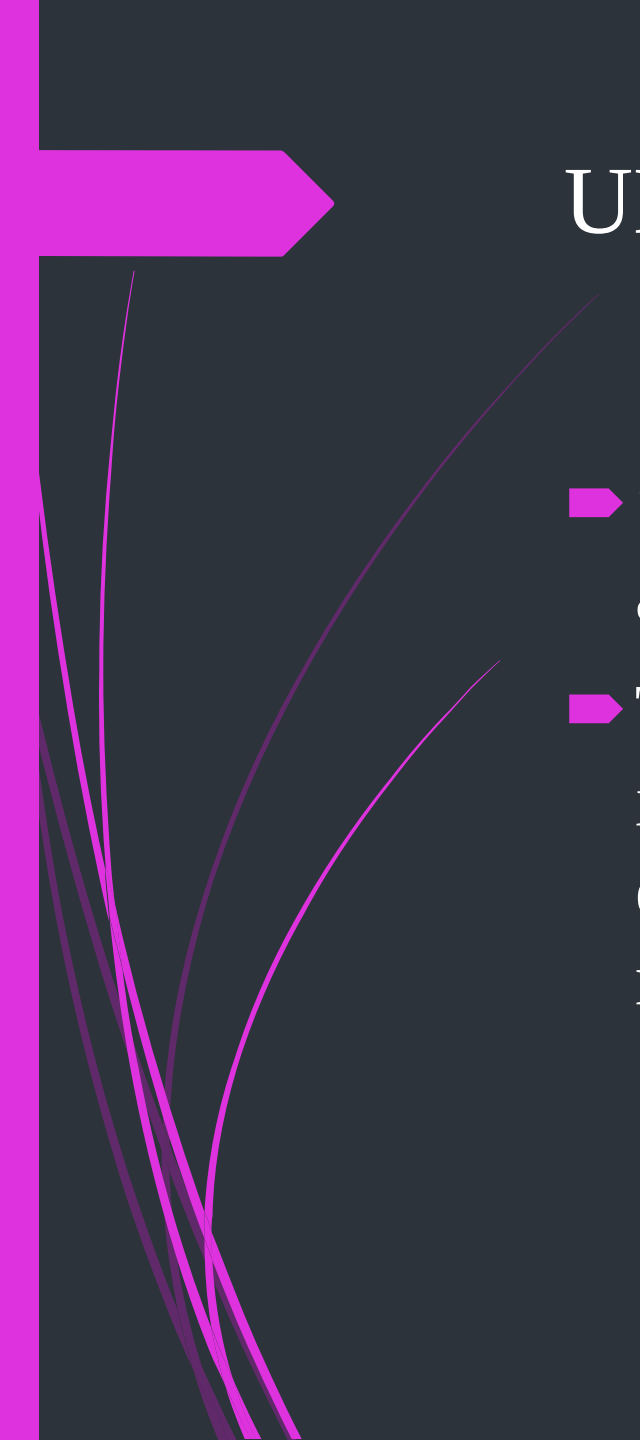
Management

- The treatment indicated for ameloblastic fibroma is enucleation
- periodic radiographic reexamination of the treated area is a necessary precaution.



UNICYSTIC (MURAL)AMELOBLASTOMA

- The unicystic ameloblastoma that forms in the wall of a dentigerous cyst ranks next to the dentigerous cyst as the most frequently occurring pathologic
- Were found in patients under 30 years of age.
- Is asymptomatic and remains undetected until the pericoronal radiolucency is seen on the routine radiograph



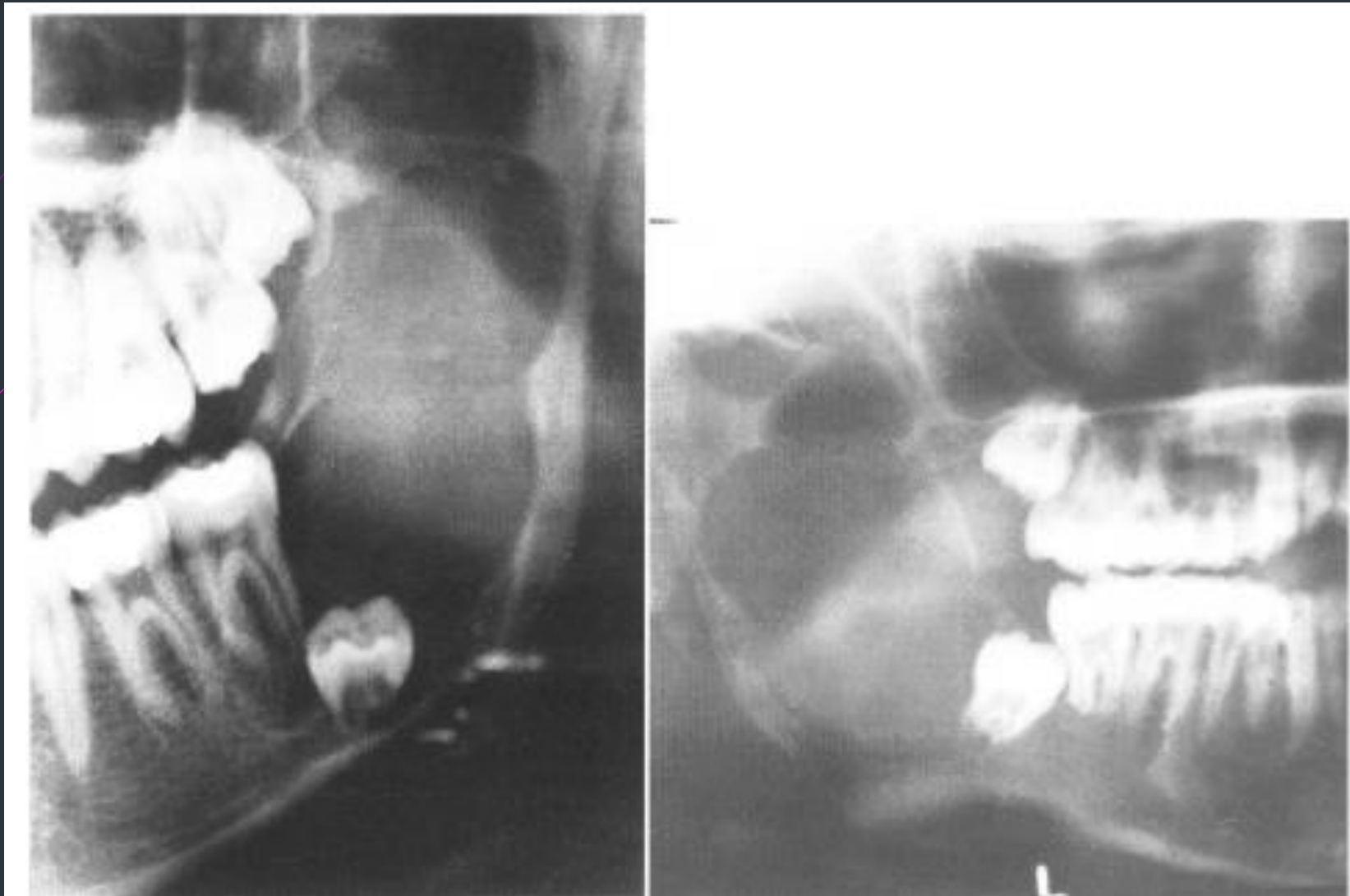
UNICYSTIC (MURAL)AMELOBLASTOMA

- Slowly enlarges, a slight, nontender swelling becomes apparent on clinical examination
- The ameloblastoma and mural ameloblastoma are similar in predilections for gender (occurring approximately equally in men and women) and site (mandibular third molar region).



Management

- The treatment indicated for mural ameloblastic is enucleation



AMELOBLASTOMA

- The pericoronal radiolucency under investigation may prove to be an ordinary ameloblastoma at surgery and microscopic study.
- In other words the radiolucent cavity may be completely filled by ameloblastoma that has infiltrated peripherally into the bony margins.
- Presumably, such examples represent mural (unicystic) ameloblastomas that have developed into full-blown ameloblastomas.
- At any rate, these should be recognized as locally aggressive lesions that require extensive surgery



CALCIFYING ODONTOGENIC CYST OR TUMOR

- COC should be included with the mixed radiolucentradiopaque lesions
- A wide variation in the amount of calcified material has been observed in these lesions; this variation ranges from extremely small foci that can be seen only at the microscopic level to moderate-sized foci that can readily be seen as white flecks in the cystic radiolucency
- it is apparent that in the early stage the calcifying odontogenic cyst or tumor appears as a completely radiolucent cystlike lesion





Thanks for your attention