口腔診斷學

第一大組

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General Data

- Name：xxx
- Chart no.：xxxxxx
- Sex：女
- Age：42 y/o
- Native：台灣屏東
- Occupation：？
- First visit：xxxxxx

Chief Complaint

- The 42y/o female suffered from upper posterior toothache the day before came to LDC.

Present Illness

- The LDC dentist found an unusual condition in lower posterior area after taking a x-ray.
- According to the patient, pain occur in the left lower posterior area on pressure for a period of time.
- So the LDC dentist refered her to our OPD for the further examination.

Intraoral Examination

Intraoral Examination

- A hard swelling, intact, covering with normal mucosa mass over L't lower teeth molar region, about 3X5 cm in diameter.
- The fixed mass is smooth, sessile.
- The shape is dome, color is pink.
- Pain(-)
- Tenderness(-)
- Induration(-)
- Lymphadenopathy(-)

Intraoral Examination

Dental findings

-Missing teeth:

18 28 36 38

-Filling(occlusal surface):

27(c) 46(c) 37(a)

Past dental history

- Prosthesis
- Endo
- Restoration

Past medical history

- Non special systemic disease or allergy.

Personal habits

- Risk factors related to malignancy
  - Alcohol：(+) for long time
  - Betel quid：(-)
  - Cigarette：(-)

Personal habits

- She has had alcohol for long time, included beer, 保力達, 高梁.
- The patient's past dental history is unremarkable.

Radiographic Exam(Panoramic film)

- There is a well-defined unilocular round shaped radiolucence under tooth 37 extending from left retromolar area down to the mandibular angle and from mesial aspect of tooth 37 up to one-third of the left ramus area,measuring approximately 3X5 cm in diameter.

Differential diagnosis

Inflammation？ cyst？ Neoplasm?

Because :
1.Purulent drainage (-)
2.Fever or local heat (-)
3.Fluctuation (-)
4.Complaint of pain or other uncomfortable symptom (-)
5.Overlying mucosa: normal color(pink)

Probable :
non-inflammation cyst

Because :
non-inflammation
rule out :
radicular cyst
buccal bifurcation cyst
residual cyst

or

Probable :
Neoplasm

Because：
1.Destruction of mandible with bony expansion
2. Well-defined RL

Conclusion：
Neoplasm or non-inflamatory cyst

Differential diagnosis

Benign or Malignant?

Because：
1. Pain (-)
2. Tenderness (-)
3. Ulceration (-)
4. Numbness (-)
5. Induration (-)
6. Smooth surface (+)
7. Slow growing (+)
8. A well-defined RL bony lesion

→ Probable : Benign tumor

Conclusion：
Benign tumor

Differential diagnosis

Central type？ Peripheral type？

Because：

1. Well-defined RL (+)
2. Bone expansion (+)
3. Bony destruction from sub-cortical bone (+)
4. Bone perforation (-)
5. Mucosal lesion (-)

→ Probable: Central type

Conclusion：
Central type

Differential diagnosis

According to above differential diagnosis
Probable：
Non-inflammatory cyst
or
Central type benign tumor

Non-inflammatory cyst

(developmental cyst)

A.
According to
1.no uneruped tooth
2.Lesion site
3.X-ray finding

Excluding:
1.Dentigerous cyst
(not a peri-coronal cyst)
2.Eruption cyst
3.Gingival cyst
4. Lateral periodontal cyst

B.
Because :
1.No Biopsy information
2.No calcifying material in lesion site
Excluding :
Gorlin cyst。

C.
Because :
1.No cross midline
2.In posterior region
3.No discharge
Excluding :
Glandular odontogenic cyst

D.
According to
1.Missing tooth 36、tooth 38
2.X-ray finding
3.Lesion site
Probable :
Odontogenic keratocyst

Non-inflammatory cyst
(developmental cyst)

According to above differential diagnosis
Probable :
Odontogenic keratocyst

Intra-bony benign tumor

According to
1.Lesion side
2.Clinical features
3.X-ray finding
4.No Biopsy

Excluding following disease :
1. Adenomatoid odontogenic tumor
   (No duct like structure、
   Most often in anterior region)
2. Clear cell odontogenic tumor
   (<20 cases to date from1985)
3. Squamous odontogenic tumor
   (<40 cases to date from1975)
4. Odontoma
   No calcifying material in lesion site

According to above differential diagnosis
Probable :

1. Central odontogenic fibroma
2. Granular cell odontogenic tumor
3. Ameloblastma
4. Amelobalstic fibroma
5. Odontogenic myxoma
6. Pindborg tumor

Working diagnosis

High compatible to low compatible

Central type benign tumor

1. Central odontogenic fibroma
2. Granular cell odontogenic tumor
3. Ameloblastma
4. Amelobalstic fibroma
5. Odontogenic myxoma
6. Pindborg tumor

Non-inflammatory cyst

1. Odontogenic keratocyst

Central odontogenic fibroma

Central odontogenic fibroma

Clinical features

- Ages range from 4-80 years, mean age is 40 years.
- 2.2 : 1 female : male
- About 45% occurred in maxilla
- Most maxillary lesions are located anterior teeth.
- 55% in mandible
- Half of mandiblular lesion located posterior teeth.
- 1/3 associated with an unerupted tooth

Central odontogenic fibroma

Clinical features(cont.)

- Smaller lesions are usually asymptomatic.

Central odontogenic fibroma

Radiographic features

- Small lesion tend to be well-defined, unilocular, radiolucent.
- Larger lesions tend to be multilocular radiolucent.
- Many lesions have sclerotic border.
- May cause root divergence
- 12% will exhibit radiopaque flecks.

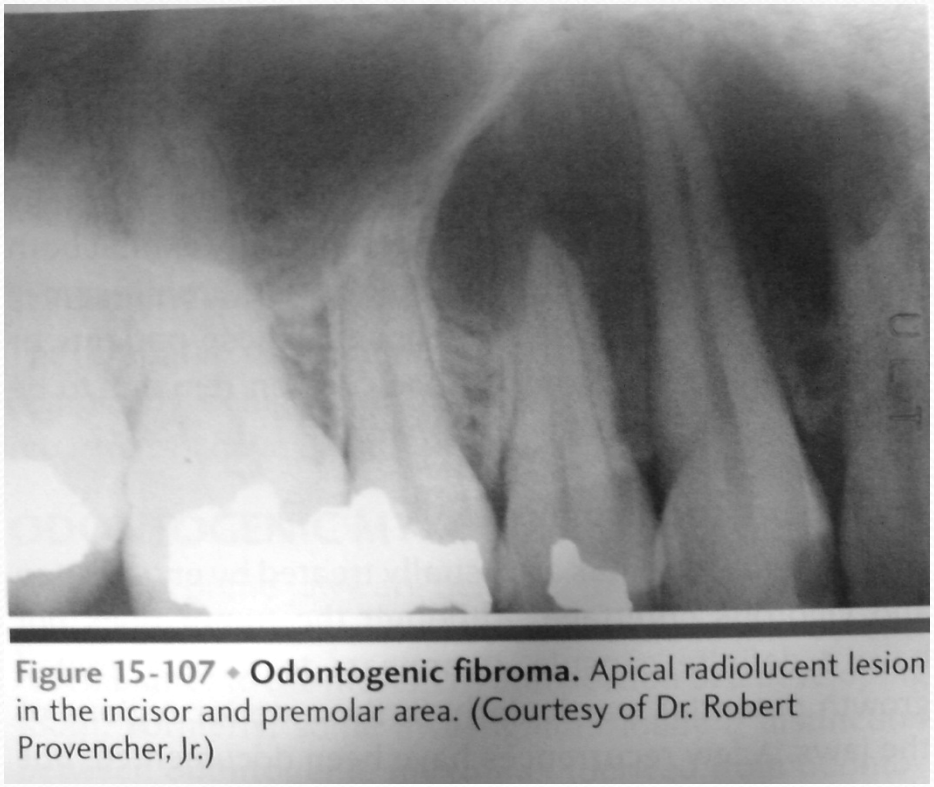


Figure 15-107 • **Odontogenic fibroma.** Apical radiolucent lesion in the incisor and premolar area. (Courtesy of Dr. Robert Provencher, Jr.)

Central odontogenic fibroma

Our case

Central odontogenic fibroma

Differential diagnosis

Higher compatible:

- Ages range from 4-80 years, mean age is 40 years.
- 2.2 : 1 female : male
- 55% in mandible.
- Half of lesion located posterior teeth.
- Radiograph, small lesion tend to be well-defined, unilocular, radiolucent.
- 12% will exhibit radiopaque flecks.

Central odontogenic fibroma

Differential diagnosis

Less compatible:

- 1/3 associated with an unerupted tooth.
- Larger lesions tend to be multilocular radiolucent.
- Many lesions have sclerotic border.

Granular cell odontogenic tumor

Granular cell odontogenic tumor

Clinical feature

- Adult, half older than 40 y/o.
- Most occurs in mandible.
- Most often in premolar and molar area.
- Some asymptomatic, some present localized expansion of affected area.

Granular cell odontogenic tumor

Radiographic features

- well-demarcated radiolucency.
- May be unilocular or multilocular.
- Occasionally show small calcification.

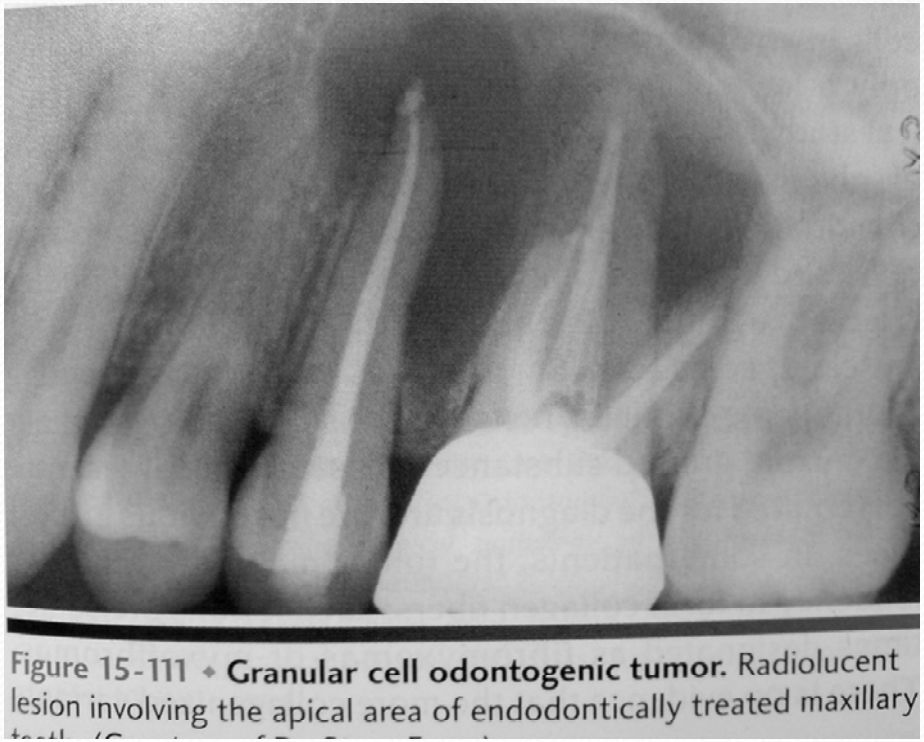


Figure 15-111 ◆ **Granular cell odontogenic tumor.** Radiolucent lesion involving the apical area of endodontically treated maxillary

Granular cell odontogenic tumor

Our case

Granular cell odontogenic tumor

Differential diagnosis

Higher compatible

- Most occurs in mandible.
- Most often in premolar and molar area.
- Some asymptomatic, some present localized expansion of affected area.

Less compatible

- Occasionally show small calcification.

Ameloblastoma

Ameloblastoma

Clinical features

- Ameloblastomas are often associated with the presence of unerupted teeth.
- painless swelling, facial deformity if severe enough.
- pain if the swelling impinges on other structures, loose teeth, ulcers, and periodontal disease.

Ameloblastoma

Clinical features(cont.)

- Lesions will occur in the mandible and maxilla, although 75% occur in the ascending ramus area and will result in extensive and grotesque deformitites of the mandible and maxilla.
- The lesion has a tendency to expand the bony cortices because slow growth rate of the lesion allows time for periosteum to develop thin shell of bone ahead of the expanding lesion.

Ameloblastoma

Clinical features(cont.)

- This shell of bone cracks when palpated and this phenomenon is referred to as "Egg Shell Cracking", an important diagnostic feature.

Ameloblastoma

Radiographic features

- Multicular RL lesion
- “Soap bubble” appearance when the RL loculations are large.
- “Honeycombed” when the loculations are small.
- Resoption of the roots of teeth adjacent to the tumor is common.
- An unerupted teeth (often a mandibular third molar)is associated with it .

Ameloblastoma

Radiographic features(cont.)

- Small unilocular ameloblastoma resemble almost any type of cystic lesion.
- The margin often shows irregular scalloping.

Figure 15-55 ◆ **Ameloblastoma.** Large multilocular lesion involving the mandibular angle and ascending ramus. The large loculations show the "soap bubble" appearance. An unerupted third molar has been displaced high into the ramus.

Ameloblastoma

Our case

Ameloblastoma

Differential diagnosis

Higher compatible:

- Lesions will occur in the mandible and maxilla.
- The lesion has a tendency to expand the bony cortices because slow growth rate of the lesion allows time for periosteum to develop thin shell of bone ahead of the expanding lesion.

Ameloblastoma

Differential diagnosis

Less compatible:

- Ameloblastomas are often associated with the presence of unerupted teeth.
- This shell of bone cracks when palpated and this phenomenon is referred to as "Egg Shell Cracking", an important diagnostic feature.
- “Soap bubble” appearance when the RL loculations are large.
- “Honeycombed” when the loculations are small.

AMELOBLASTIC FIBROMA

Ameloblastic fibroma

Clinical features

- Tend to occur in younger patients about the first two decades of life.
- Slightly more common in male than in female.
- Small ameloblastic fibromas are asymptomatic.
- Lager tumors are associated with swelling of the jaws.
- The posterior mandible is the most common site.

Ameloblastic fibroma

Radiographic features

- Unilocular or multilocular RL lesion.
- Radiographic margin tend to be well defined, and they may be sclerotic.
- An unerupted tooth is associated with the lesion in about 75% of cases.

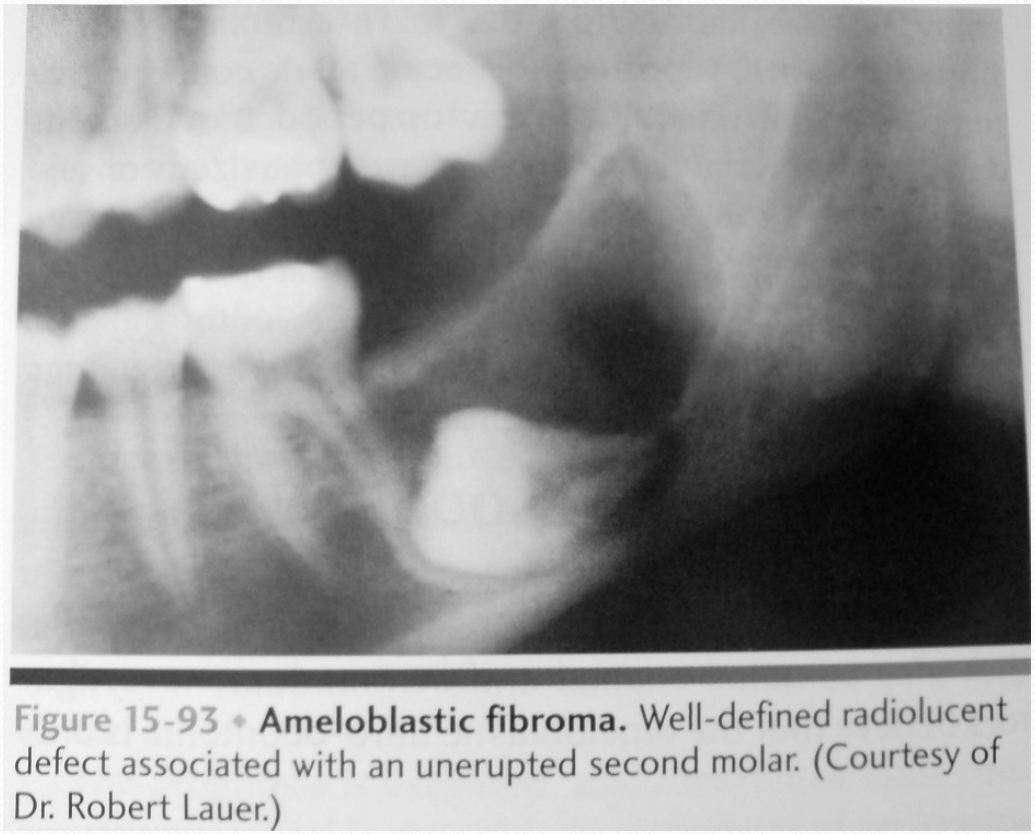


Figure 15-93 • **Ameloblastic fibroma.** Well-defined radiolucent defect associated with an unerupted second molar. (Courtesy of Dr. Robert Lauer.)

Ameloblastic fibroma

Our case

Ameloblastic fibroma

Differential diagnosis

Higher compatible

- Lager tumors are associated with swelling of the jaws.
- Unilocular RL lesion.
- The posterior mandible is the most common site.
- Radiographic margin tend to be well defined.

Ameloblastic fibroma

Differential diagnosis

Less compatible

- Tend to occur in younger patients about the first two decades of life.
- Slightly more common in male than in female.
- An unerupted tooth is associated with the lesion in about 75% of cases.

odontogenic myxoma

odontogenic myxoma

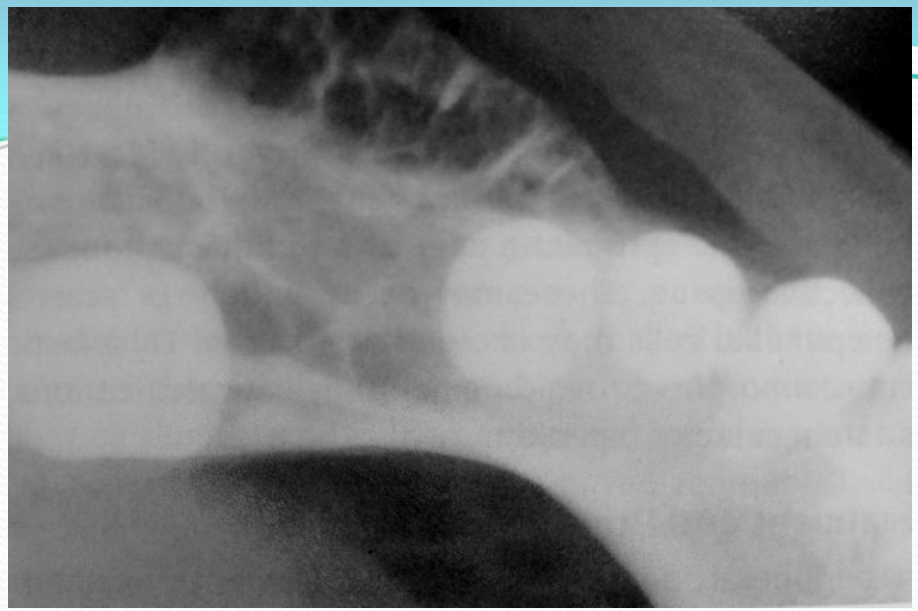
Clinical features

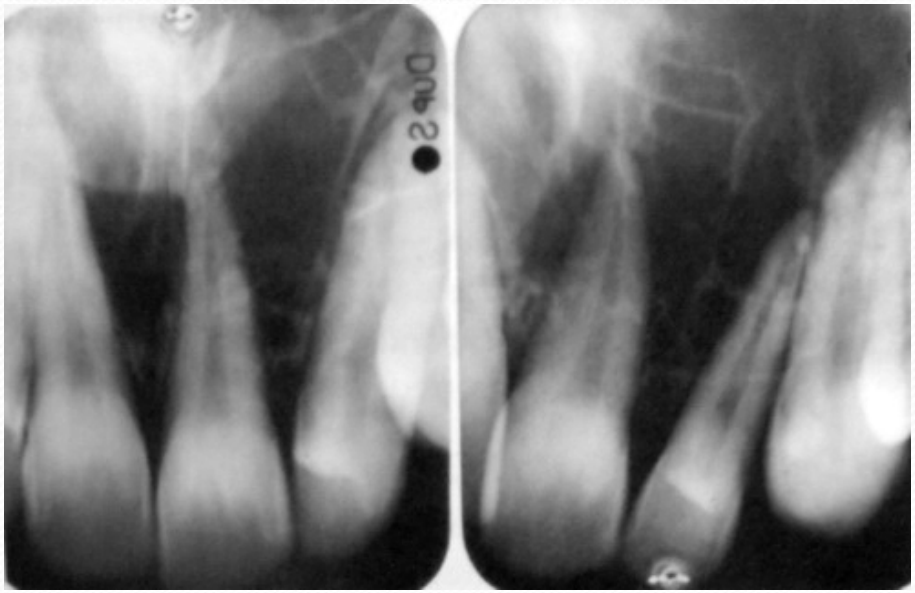
- Ages range is wide, but predominantly in young aldult, average age is 25-30 y/o
- No sex predilection.
- Can be found in almost any area of the jaw.
- Mandible is involved more commonly than the maxilla.
- Smaller lesions may be asymptomatic and discovered only during a radiographic examination.
- Larger lesions are often associated with a painless expansion of the involved bone.

odontogenic myxoma

Radiographic features

- Unilocular or multiocular radiolucency.
- May displace or cause resorption of the teeth in the area of the tumor.
- The margins of the radiolucency are often irregular or scalloped.
- The radiolucent defect may contain thin, wispy trabeculae of residual bone, which are often arranged at right angles to one another.
- Large myxomas of the mandible may show a “soap bubble” radiolucent pattern.





Odontogenic myxoma

Our case

odontogenic myxoma

Differential diagnosis

Higher compatible:

- Mandible is involved more commonly than the maxilla.
- Unilocular or multiocular radiolucency.
- Larger lesions are often associated with a painless expansion of the involved bone.

odontogenic myxoma

Differential diagnosis

Less compatible:

- predominantly in young adult, average age is 25-30 y/o.
- The margins of the radiolucency are often irregular or scalloped.
- The radiolucent defect may contain thin, wispy trabeculae of residual bone, which are often arranged at right angles to one another.
- Large myxomas of the mandible may show a “soap bubble” radiolucent pattern.

Calcifying epithelial odontogenic tumor (Pindborg tumor)

PINDBORG TUMOR

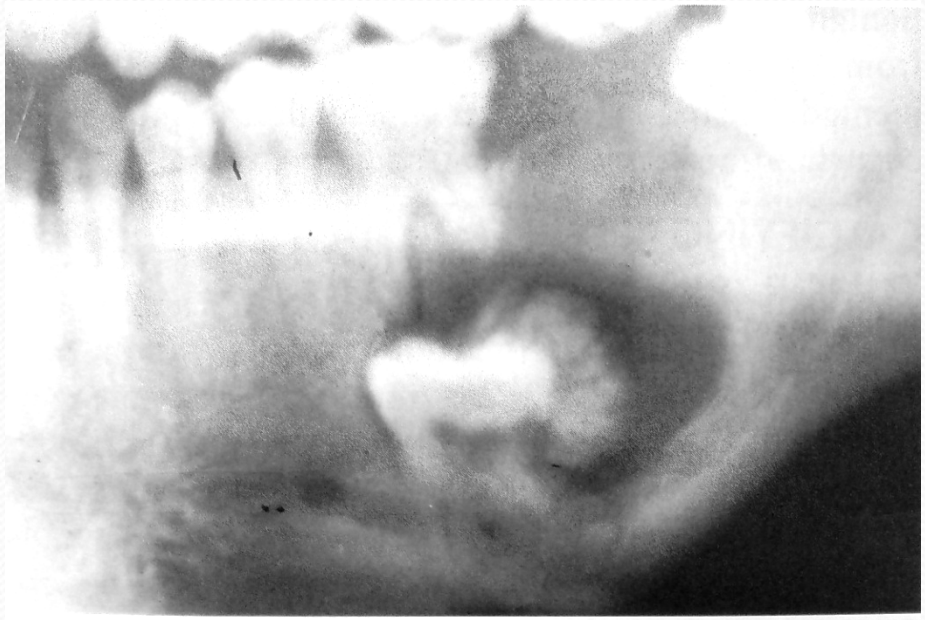
Clinical features

- incidence ：<200 cases to date
- age ：30~50 y/o
- sex ：no predilection
- site ：2/3 in the mandible most often in the posterior areas of mandible (57%).
- Painless, slow growing swelling.
- Few cases are extraosseous, exhibiting nonspecific , sessile gingival masses.

PINDBORG TUMOR

Radiographic features

- Unilocular or multilocular radiolucency.
- May be entirely radiolucent.
- The margins of lytic defect are often scalloped.
- Calcified structures of varying size and density.
- Frequently associated with impacted tooth.
- Calcification are most prominent around the crown of impacted tooth.



Pindborg tumor

Our case

PINDBORG TUMOR

Differential diagnosis

Higher compatible

- 30~50 y/o
- Posterior area of mandible
- Painless, slow growing swelling
- Unilocular radiolucency

Less compatible

- Calcified structures
- Present around an impacted tooth

Odontogenic keratocyst

Odontogenic keratocyst

Clinical features

- Slight male predilection.
- 60%~80% mandible posterior body and ascending ramus.
- Small cyst usually asymptomatic.
- large cyst may be associated with pain, swelling or drainage.
- Grow in an anterioposterior direction within the medullary cavity of bone without causing bone expansion.

Odontogenic keratocyst

Radiographic features

- Well-defined radiolucent area with smooth and often corticated margin
- 25%~40% unerupted tooth involved
- Resorption of roots is less common

igure 15-13 ◆ **Odontogenic keratocyst.** Large, multilocular cyst nvolving most of the ascending ramus. (Courtesy of Dr. S.C. oddy.)

Odontogenic keratocyst

Our case

Odontogenic keratocyst

Differential diagnosis

Higher compatible

- 60%~80% mandible posterior body and ascending ramus.
- Small cyst usually asymptomatic.
- Well-defined radiolucent area with smooth and often.
- Resorption of roots is less common.

Odontogenic keratocyst

Differential diagnosis

Less compatible

- Slight male predilection.
- large cyst may be associated with pain, swelling or drainage.
- 25%~40% unerupted tooth involved corticated margin.

Final diagnosis

Central odontogenic fibroma

……as for definitive diagnosis, biopsy is still needed

Thank you for attention