Intern A:
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指導醫師：口腔病理科全體醫師

CASE REPORT

2011/09/26
CHIEF COMPLAINT

100. 4.7

- Recurrent tumor over right coronoid process for about 2 years.
PERSONAL DATA

• Name: 韓XX
• No. of Chart: 1XXXXXX8
• Gender: Female
• Age: 33 y/o
• Marital status: 已婚
• Address: 高雄市三民區
• Date of first visit: 91/5/28
PHYSICAL EXAMINATION

- Surface: Smooth
- Pain: (-)
- Tenderness: (-)
- Right chin numbness, due to previous OP
- No effect on facial profile
PRESENT ILLNESS

91.5.28

- Swelling over right posterior mandible for 2 months.
- O.E.: 2x2cm, smooth, firm, fixed, painless, tenderness(-)
- Refer from 長庚H for biopsy and further treatment.
- Panoramic findings: large radiolucency shadow over right posterior mandible extended into ramus (near sigmoid notch)
- Incision biopsy was done, H-P result: Unicystic Ameloblastoma, desmoplastic, right mandible
- Aspiration: (+) yellowish fluid
- C-T image findings: compatible with ameloblastoma at right mandibular angle
91.6.18~91.9
- Decompression with Penrose drain, N/S irrigation
- O.P. on 91.10.4 : excision + bone trimming

91.8.7
91.6.18~91.9

- Decompression with Penrose drain, N/S irrigation
- O.P. on 91.10.4 : excision + bone trimming
• 91.6.18~91.9
  – Decompression with Penrose drain, N/S irrigation
  – O.P. on 91.10.4 : excision + bone trimming

91.11.6
• 92.7.9~94.5.2
  – Regular follow up, panoramic film: stationary
95.6.7

Panoramic film show: radiolucent lesion over right mandibular body and angle again.
96.4.20
Incision biopsy, H-P result: ameloblastoma, right mandibular
OP on 96.5.16 : excision + Bone trimming

96.4.20
• OP on 96.5.16: excision + Bone trimming

96.6.15
96.8.10

- Radiolucent lesion over posterior margin of the lesion with radiopacities
- Excision of the RO lesion, bone, H-P: osteomyelitis
• 96.12.7~98.2.12
  – Regular follow up, Panoremic film: OK

96.12.7
- 96.12.7~98.2.12
  - Regular follow up, Panoremic film: OK

97.2.15
• 96.12.7~98.2.12
  – Regular follow up, Panoremic film: OK

97.8.8
• 98.2.12
  – Panoremic film: subcoronoid lesions
• 98.5.14
  - Panoremic film: radiolucent lesion over right coronoid process
• 100.4.7
  – Panoremic film: radiolucent lesion over right coronoid process growing larger in diameter (15.9x19.0 mm)
  – Arrange OP on 6/3
PAST MEDICAL HISTORY

- Hospitalization: (+)
  91.10 : O.S. ward, ameloblastoma, R’t mand., excision + bone trimming
  96.5 : O.S. ward, ameloblastoma, R’t mand., excision + bone trimming
- Surgery under GA: (+)
- Allergy to Pentothal, Tracrium
- Systemic disease: nil
PAST DENTAL HISTORY

- Denture, general routine dental treatment
- Attitude to dental treatment: cooperative
PERSONAL HABITS

- Alcohol drinking (-)
- Betel nut chewing (-)
- Cigarette smoking (-)
- Denied other specific habit
91年10月：
Ameloblastoma at right mandibular angle and body

96年5月：
Recurrent ameloblastoma at right mandibular angle and body

100年6月：
Recurrent ameloblastoma at right mandible coronoid process
Inflammation  Cyst  Neoplasm
<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Inflammation</th>
<th>Cyst</th>
<th>Neoplasm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>Normal</td>
<td>Red</td>
<td>Normal</td>
<td>Variable</td>
</tr>
<tr>
<td><strong>Discharge</strong></td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Consistency</strong></td>
<td>Firm</td>
<td>Rubbery</td>
<td>Soft</td>
<td>Firm</td>
</tr>
<tr>
<td><strong>Pain</strong></td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>Ulceration</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>Mobility</strong></td>
<td>Fixed</td>
<td>Fixed</td>
<td>Fixed</td>
<td>Fixed</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>1-2 Month(s)</td>
<td>Days</td>
<td>Years</td>
<td>Months</td>
</tr>
<tr>
<td>Feature</td>
<td>Our case</td>
<td>Benign</td>
<td>Malignancy</td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>----------</td>
<td>---------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>Smooth</td>
<td>Smooth</td>
<td>Rough</td>
<td></td>
</tr>
<tr>
<td>Ulceration</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>X-ray margin</td>
<td>Well-defined</td>
<td>Well-defined</td>
<td>Poor-defined</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>Fixed</td>
<td>Movable</td>
<td>Fixed</td>
<td></td>
</tr>
<tr>
<td>LAP</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>1-2 Month(s)</td>
<td>years</td>
<td>Months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Our case</td>
<td>Central</td>
<td>Peripheral</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
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<td>---------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>Consistency</td>
<td>Firm</td>
<td>Firm</td>
<td>Rubbery</td>
<td></td>
</tr>
<tr>
<td>Ulceration</td>
<td>-</td>
<td>+/-</td>
<td>+/-</td>
<td></td>
</tr>
<tr>
<td>Induration</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>X-ray border</td>
<td>well-defined</td>
<td>well-defined</td>
<td>ill-defined</td>
<td></td>
</tr>
<tr>
<td>Bony expansion or perforation</td>
<td>+</td>
<td>+/-</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td>Fixed</td>
<td>Fixed</td>
<td>Fixed</td>
<td></td>
</tr>
</tbody>
</table>
WORKING DIAGNOSIS

- Recurrent ameloblastoma, right coronoid process
- Odontogenic keratocyst
AMELOBLASTOMA

- Without pain
- 20-70 y/o
- 80-85% posterior mandibular, cortical bone expansion, 易造成牙根吸收
- Multilocular RL, local invasive, 易復發(50% - 90%)
- Firm or fluctuant with straw colored fluid
## COMPARISON

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Ameloblastoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>F</td>
<td>Both (M~F)</td>
</tr>
<tr>
<td>Age</td>
<td>24</td>
<td>20-50 (40)</td>
</tr>
<tr>
<td>Site</td>
<td>Right posterior mandible</td>
<td>Mandible 80% Posterior 70%</td>
</tr>
<tr>
<td>Pain</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ulcer</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LAP</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Consistency</td>
<td>Firm</td>
<td>Firm/Fluctuant</td>
</tr>
<tr>
<td>Shape</td>
<td>Well-defined</td>
<td>ill-defined Ragged borders</td>
</tr>
<tr>
<td>Features</td>
<td>Radicular, radiolucent, smooth</td>
<td>Multilocular, erode cortical</td>
</tr>
<tr>
<td></td>
<td>contours</td>
<td>plates</td>
</tr>
</tbody>
</table>
ODONTOGENIC KERATOCYST

- 10-40 y/o
- Posterior mandible, less cause bone expansion
- Well defined unilocular RL, sometimes scallop-border, multilocular, less cause tooth root absorption
- Firm fluctuant
- 易復發 (5% - 62%)
- Cheesy, yellow substance
<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>OKC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>F</td>
<td>M=56.9%</td>
</tr>
<tr>
<td>Age</td>
<td>24</td>
<td>10-30(28)</td>
</tr>
<tr>
<td>Site</td>
<td>Right posterior mandible</td>
<td>Mandible 65% 3rd molar</td>
</tr>
<tr>
<td>Pain</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ulcer</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>LAP</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Consistency</td>
<td>firm</td>
<td>firm</td>
</tr>
<tr>
<td>Shape</td>
<td>Well-defined</td>
<td>Well-defined Scallop border</td>
</tr>
<tr>
<td>Features</td>
<td>Radicular, radiolucent, smooth contours</td>
<td>Hazy radiolececy</td>
</tr>
</tbody>
</table>
HISTOPATHOLOGIC DIAGNOSIS

- Recurrent ameloblastoma (follicular type), right coronoid process
Ameloblastoma

DISCUSSION
Recurrent ameloblastoma
initial: desmoplastic type
1st recur: plexiform and acanthomatous type
2nd recur: follicular type
AMELOBLASTOMA

- Clinically可分为三種類型:
  - Conventional (intraosseous): 86%
  - Unicystic: 13%
  - Peripheral (extraosseous): 1%

- 佔所有odontogenic tumor第2位
- 是種slow growing, local invasive的腫瘤
- 可能跟TNF-alpha, antiapoptotic protein, interface protein (FGF)過度表現有關
CLINICAL FEATURES

- Sex predilection: none
- Age predilection: 20~70歳平均分布
- Racial predilection: none
- Site predilection: 80~85% 在 mandible，特别是 molar-ramus area

<table>
<thead>
<tr>
<th></th>
<th>Anterior</th>
<th>Premolar</th>
<th>Molar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxilla</td>
<td>6%</td>
<td>1%</td>
<td>6%</td>
</tr>
<tr>
<td>Mandible</td>
<td>10%</td>
<td>11%</td>
<td>66%</td>
</tr>
</tbody>
</table>
Symptom and sign:

- Pain and paresthesia 並不常見
- 當 tumor 很大，造成 cortical bone expansion，觸診時有 eggshell cracking 的感覺
RADIOGRAPHIC FEATURES:

- Mutilocular RL: 呈現Soap bubble(肥皂泡)或honeycombed(蜂窩狀)
- Combine impacted tooth: 常見:多半是mandible 3rd molar
- Buccal 和lingual 的bony expansion: 常見
- 鄰近牙齒的牙根: 常見吸收
- 但有一種特別的分類叫desmoplastic ameloblastoma，好發在anterior maxilla區，因其有很緻密的fibrous stroma，呈現RL+RO
HISTOPATHOLOGIC FEATURES

- 沒有capsule，或並不明顯
- 基本構造細胞有三種
- Ameloblast-like cell:
  - High columnar (高柱狀) epithelial cell
  - Reversed polarity: 核偏一邊，會遠離basal membrane，朝向stellate reticulum
- Stellate reticulum
  - loosely arranged angular epithelial cell
- Mature fibrous stroma:
  - 是成熟、成束的fibroblast
  - 是中胚層來源
顯微鏡下多變，有幾種分類的方式:

<table>
<thead>
<tr>
<th>依island的形狀與細胞排列方式</th>
<th>依stellate reticulum的變化來分</th>
<th>依fibrous stroma的緻密度來分</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follicular Plexiform</td>
<td>Acanthomatous type Granular cell type Basal cell type</td>
<td>Desmoplastic type</td>
</tr>
</tbody>
</table>
## Differential Diagnosis

<table>
<thead>
<tr>
<th>All type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>follicular</td>
<td>團狀，最常見，microcyst</td>
</tr>
<tr>
<td>plexiform</td>
<td>索狀</td>
</tr>
<tr>
<td>acanthomatous</td>
<td>Squamous metaplasia</td>
</tr>
<tr>
<td>Granular cell</td>
<td>Granular cell, lysosome, young, more aggressive</td>
</tr>
<tr>
<td>Basal cell</td>
<td>最少見，stellate reticulum 很少，basaloid cell</td>
</tr>
<tr>
<td>desmoplastic</td>
<td>Dense stroma, enamel-like island, RL+RO,上顎前牙,transforming growth factor beta</td>
</tr>
</tbody>
</table>
TREATMENT AND PROGNOSIS:

- 具有局部侵犯性(local invasive)，實際病灶會浸潤到周邊的bone，使真正的tumor size，比起X-ray或臨床診斷的更大，故需要wide resection
- Recurrence rate高達50~90%
THANKS FOR YOUR ATTENTION