Case Report

Intern B 组
2014/09/30
General data & 醫學倫理討論: 羅世洺
Differential diagnosis & Treatment course: 郭偉祥、龔修弘
Discussion: 簡瑜文
Name: OOO
Sex: Female
Age: 17 y/o
Native: 高雄市
Marital status: 未婚
Attending staff: 0 0 0 醫師
First visit: 103/07/11
Pain over the left lower posterior area, referred from LDC for bony expansion over tooth 33,34,35 area

103/07/11
This 17 y/o female went to LDC because of pain over the lower left posterior area. The dentist found a bony expansion over the alveolar ridge of the tooth 33,34,35 area. Therefore, the dentist referred her to our OS OPD for further examination and treatment.
Surface: Smooth
Shape: Dome
Size: 2.5 cm in diameter
Color: Pink
Consistency: Hard
Fluctuation (-)
Mobility: Fixed
Pain (+)
Tenderness (-)
Induration (-)
Ulceration (-)
Teeth tilting: tooth 33 (distal) 34 35 (mesial)
There is a well-defined homogeneous round-shaped mild radiopacity over the L’t parasympysis area, extending from mesial root of tooth 31 to distal root of tooth 35, and from middle third of crown of tooth 33,34 to 0.5cm above the left mandibular border, measuring approximately 2.5 x 2.5 cm and causes displacement of tooth 32, 33, 34, 35.
Dental findings:
- Horizontal impaction: tooth 38, 48
- Distal-tilting: tooth 32, 33
- Mesial-tilting: tooth 34, 35, 36
Past medical history

- Underlying disease (-)
- Hospitalization (-)
- Surgery under GA (-)
- Allergy: Denied
Attitude to dental treatment: Co-operative
General routine dental treatment
Risk factors related to malignancy
  o Alcohol drinking (-)
  o Betel quid chewing (-)
  o Cigarette smoking (-)

Special oral habits: Denied
Differential Diagnosis
Intrabony or peripheral?
Inflammation, cyst, or neoplasm?
Benign or malignant?
<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Intrabony</th>
<th>Peripheral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mucosal lesion</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Bone expansion</td>
<td>+</td>
<td>+/-</td>
<td>-</td>
</tr>
<tr>
<td>Cortical bone destruction</td>
<td>-</td>
<td>+/-</td>
<td>-</td>
</tr>
<tr>
<td>Consistency</td>
<td>Hard</td>
<td>Hard</td>
<td>Soft, firm, rubbery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>.....</td>
</tr>
<tr>
<td>Induration</td>
<td>-</td>
<td>-</td>
<td>+/-</td>
</tr>
</tbody>
</table>

→Our case is a **Intrabony**
### Inflammation or neoplasm

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Inflammation</th>
<th>Neoplasm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regress or progress</strong></td>
<td>Progress</td>
<td>Regress</td>
<td>Progress</td>
</tr>
<tr>
<td><strong>Symptom</strong></td>
<td>-</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>Growth rate</strong></td>
<td>Months, years</td>
<td>Hours, days, weeks</td>
<td>Weeks, months, years</td>
</tr>
<tr>
<td><strong>Lymph node enlarge</strong></td>
<td>-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>Tenderness</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Fluctuation</strong></td>
<td>-</td>
<td>+/-</td>
<td>-</td>
</tr>
</tbody>
</table>

→Our case is a neoplasm.
Benign or malignant

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Benign</th>
<th>Malignant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border</td>
<td>Well defined radiopacity</td>
<td>Well-defined</td>
<td>Poorly defined</td>
</tr>
<tr>
<td>Pain</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Induration</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Swelling with intact epithelium</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>Progress</td>
<td>Slow</td>
<td>Slow</td>
<td>Fast</td>
</tr>
<tr>
<td>Metastasis</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Lymphadenopathy</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

→Our case is a **benign tumor**
Working Diagnosis

- Cemento-ossifying fibroma
- Cemento-osseous dysplasia, focal
- Fibrous dysplasia
- Ameloblastoma, desmoplastic type
## Cemento-ossifying fibroma

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Cemento-ossifying fibroma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
<td>17</td>
<td>20~40</td>
</tr>
<tr>
<td>Site</td>
<td>Left mandibular canine and premolar region</td>
<td>Mandibular premolar region</td>
</tr>
<tr>
<td>Symptom and Sign</td>
<td>Painful swelling</td>
<td>Painless swelling</td>
</tr>
<tr>
<td>Jaw expansion</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Teeth displacement</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
## Radiologic features

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Cemento-ossifying fibroma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Density</strong></td>
<td>RO</td>
<td>RO</td>
</tr>
<tr>
<td><strong>Border</strong></td>
<td>Well-defined</td>
<td>Well-defined with corticated margin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>R/L rim is uncommon</td>
</tr>
<tr>
<td><strong>Shape</strong></td>
<td>Round</td>
<td>Ovoid or Round</td>
</tr>
<tr>
<td><strong>Root divergence or resorption</strong></td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
### Cemento-osseous dysplasia, focal

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Cemento-osseous dysplasia, focal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Age</td>
<td>17</td>
<td>30~60</td>
</tr>
<tr>
<td>Site</td>
<td>Left mandibular canine and premolar region</td>
<td>Jaw, especially posterior mandible</td>
</tr>
<tr>
<td>Symptom and Sign</td>
<td>Painful swelling</td>
<td>Painless</td>
</tr>
<tr>
<td>Jaw expansion</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>
### Radiologic features

<table>
<thead>
<tr>
<th>Our case</th>
<th>Cemento-osseous dysplasia, focal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Density</strong></td>
<td>RO</td>
</tr>
<tr>
<td><strong>Border</strong></td>
<td>Well-defined</td>
</tr>
<tr>
<td><strong>Shape</strong></td>
<td>Round</td>
</tr>
<tr>
<td><strong>Root divergence or resorption</strong></td>
<td>+</td>
</tr>
</tbody>
</table>
### Fibrous dysplasia (monostotic)

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Fibrous dysplasia (monostotic)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Female</td>
<td>Both</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>17</td>
<td>10~20</td>
</tr>
<tr>
<td><strong>Site</strong></td>
<td>Left mandibular canine and premolar region</td>
<td>Maxilla</td>
</tr>
<tr>
<td><strong>Symptom and Sign</strong></td>
<td>Painful swelling</td>
<td>Painless swelling</td>
</tr>
<tr>
<td><strong>Jaw expansion</strong></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Teeth displacement</strong></td>
<td>+</td>
<td>Superior displacement</td>
</tr>
<tr>
<td><strong>Hormone related</strong></td>
<td>Unknown</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Do not progress beyond puberty)</td>
</tr>
</tbody>
</table>

- +: Present
- -: Absent

Our case: Female, 17 years old, painless swelling, left mandibular canine and premolar region, unknown hormone related.
Radiologic features

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Fibrous dysplasia (monostotic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>RO</td>
<td>Ground glass</td>
</tr>
<tr>
<td>Border</td>
<td>Well-defined</td>
<td>Poorly-defined</td>
</tr>
<tr>
<td>Shape</td>
<td>Round</td>
<td>Unilocular</td>
</tr>
</tbody>
</table>
## Ameloblastoma, desmoplastic type

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Ameloblastoma, desmoplastic type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td>Female</td>
<td>No</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>17</td>
<td>Wide age range Uncommon in 10-19</td>
</tr>
<tr>
<td><strong>Site</strong></td>
<td>Left mandibular canine and premolar region</td>
<td>Posterior mandible</td>
</tr>
<tr>
<td><strong>Symptom and Sign</strong></td>
<td>Painful swelling</td>
<td>Painless swelling</td>
</tr>
<tr>
<td><strong>Jaw expansion</strong></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>Teeth displacement</strong></td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>
Radiologic features

<table>
<thead>
<tr>
<th></th>
<th>Our case</th>
<th>Ameloblastoma, desmoplastic type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>RO</td>
<td>Mixed or RL</td>
</tr>
<tr>
<td>Border</td>
<td>Well-defined</td>
<td>Poor-defined</td>
</tr>
<tr>
<td>Shape</td>
<td>Round</td>
<td>Mutilocular</td>
</tr>
<tr>
<td>Root divergence or resorption</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>
Clinical impression

- Cemento-ossifying fibroma over tooth 33, 34, 35 area
Treatment Course
103/07/11 (許瀚仁醫師)
- First visit
- Biopsy → H-P: cemento-ossifying fibroma

103/07/18
- OP scheduled on 103/08/13
- Arrange CT

103/08/04
- G.A routine
- Ask for second opinion for mand. lesion
- OP scheduled on 103/08/28
There is a bony labial and lingual bony expansion with radiopacity over the parasymphysis area (2.3x2.4x2.6 cm) with intact but thinning buccal and lingual cortex.
There is a bony labial and lingual bony expansion of the left mandibular body (2.3x2.4x2.6 cm) with intact cortex, and cause displacement of teeth.
Impression:
No imaging evidence of active cardiopulmonary disease.
EKG Diagnosis: Sinus Bradycardia

ID: 29215858  Examined: 14/08/04 10:00 (Judge: --)
Name:  
HR: 59 BPM  Axis: 70°
QRS: 73 ms  QTc: 387
PQ: 137 ms  RV5-SV1: 24.7mm
Comments:  

M.D.
Pathologic diagnosis: cemento-ossifying fibroma, tooth 33,34,35 area
Imaging in the Diagnosis of Cemento-ossifying Fibroma: A Case Series

Journal of Clinical Imaging Science; 2012;2:52
R Mithra, Pavitra Baskaran, M Sathyakumar
Benign fibro-osseous lesion
- Well-defined
- RL, RL/RO, RO
- Unilocular
- Origin of COF: periodontal membrane
- Clinical: slow-growing mass, asymptomatic
- Histology: contains cementum, immature bony trabeculae
32-year-old female

Chief complain:

Swelling in the region of the upper front teeth for about 5 months

Present illness:

This 32 y/o female suffered from swelling over frontal upper area for about 5 months. This lesion was asymptomatic and gradually increased in size.
Oral examination:

A diffuse swelling in the region of teeth 21-23 on the labial aspect. The swelling was 4 x 3 cm in size and had bony expansion. Tooth 23 was displaced distally.

On palpation, the swelling was hard, non-tender, and was not fluctuant and compressible.
Case 1

- X-ray finding

- Well-defined unilocular RL/RO lesion (calcification)
- Left anterior maxillary region in relation to tooth 21,22
- Tooth 21 was displaced mesially and tooth 22 distally
- Bony expansion
Middle-aged female

Chief complaint:

Swelling on the right cheek for 6 months

Present illness

This middle-aged female suffered from swelling **without pain** on right cheek 6 months ago. This swelling **gradually increased** in size.
Oral examination

A diffuse swelling was on alveolar mucosa of tooth 13 to 16 buccal side. The surface of the lesion was smooth.

On palpitation, the swelling was found to be hard and non-tender.

Tooth 14,15 mobility, grade II
Case 2

- X-ray finding

- Well-defined lesion, scattered calcification and teeth within it
- On tooth 13 to 16 area, involving the floor of the maxillary sinus
- Bony expansion
52-year-old female patient

Chief complaint:

Swelling over right posterior lower area for 6 months

Present illness:

This 52 y/o female suffered from swelling without pain on right posterior lower area 6 months ago. This swelling gradually increased in size.
Oral examination:

A diffuse swelling measuring about $4 \times 3$ cm in size on tooth 44 to 47 buccal and lingual side with cortical plate expansion.

The swelling lacked tenderness, had a smooth surface, and was hard.

Tooth 45,47 mobility grade II
Case 3

- X-ray finding:
  - Well-defined RL/RO lesion on tooth 44 to 47 area
  - Expansion of buccal and lingual cortical plates
  - Tooth 45,47 displacement, and tooth 47 root resorption
Differential Diagnosis

- Ameloblastoma
- CEOT
- Odontogenic myxoma
- Cemento-ossifying fibroma
- Fibrous dysplasia

→ cement-ossifying fibroma
Non-odontogenic tumor
- Blast cells of mesenchymal tissue of periodontium

Clinically
- 30~40 y/o → our case (O/X)
- Female > male → our case (O)
- Mandibular premolar region → our case (O/X)
- Slow growing → our case (O)
- Asymptomatic → our case (O/X)
Most reports suggest earlier trauma
  → Our case (X/O), case 3: tooth 46 extracted

Well-defined RL, RL/RO, RO lesion with cortical margin
  → Our case (0)
The important diagnostic feature in COF:
- centrifugal growth, round tumor mass
- Root resorption, tooth displacement
  → active proliferating stage
Discussion: Differential Diagnosis

- Fibrous dysplasia
  - Ground glass, linear expansion
- Cemento-osseous dysplasia
  - Bony expansion (-)
  - Multifocal
- Condensing osteitis
  - Vitality test
  - Bony expansion (-)
Pindborg’s tumor (calcifying epithelial odontogenic tumor)
  - Impacted teeth
  - Scalloped margin
  - Driven snow in the radiograph

Odontoma
  - Tooth-like structure
Conclusion

- Via conventional and specialized radiographs
  - Location
  - Expansion of cortical plates
  - Internal architecture
  - Periphery of the lesion
  - Effect of the lesion on adjacent structures

- Imaging also plays a pivotal role in outlining the treatment plan for cement-ossifying fibroma
醫學倫理討論
生命的神聖性(Sanctity of life)：尊重自己和他人生命，尊重生命的價值

行善原則(Beneficence)：醫師要盡其所能延長病人之生命且減輕病人之痛苦。

誠信原則(Veractity)：醫師對病人有「以誠信相對待」的義務。

自主原則(Autonomy)：病患對自己之診療決定的自主權須得到醫師的尊重。

不傷害原則(Nonmaleficence)：醫師要盡其所能避免病人承受不必要的身心傷害。

保密原則(Confidentiality)：醫師對病人的病情負有保密的責任。

公義原則(Justice)：醫師在面對有限的醫療資源時，應以社會公平、正義的考量來協助合理分配此醫療資源給真正最需要它的人。
病人接受enucleation後是否緩解疼痛（主訴）情形？

- Enucleation後疼痛已較為緩解，並告知病人加強oral hygiene，以獲得更好的woung healing
誠信原則

- 對於病人的疾病是否確實通知，盡到告知的義務？
- 是否有清楚的向病人說明清楚治療計畫、預後、風險？
  - 病人於初診當日做切片檢查，一周後告知切片結果，詳細說明治療計畫 (enucleation under GA) 、預後、風險（併發症：嘔吐、喉嚨痛、腫脹等）並取得病人及家屬同意後才進行手術。
當醫師充分說明病情及治療計畫、風險之後，是否讓病人充分自主地選擇治療計畫？
- 病人及家屬選擇並同意醫師的建議。

在做全身麻醉以前，是否有說明完整之後再請病人自主的簽名同意？
- 已充分說明並與家屬溝通，簽署麻醉及手術同意書後才進行手術。
不傷害原則

手術過程中是否造成不必要醫源性傷害？
➢沒有不必要醫源性傷害。

• 是否有先完整瞭解病人的病史？
➢初診時詢問並確認病人無特殊病史、系統性疾病，和病人充分溝通後再決定治療方式及術後照顧。
保密原則

無論病人之門診病歷、手術記錄、住院記錄等皆涉及病人之隱私權，醫療工作者應善盡保密原則，不得任意洩漏，發生「病歷外流」之情形，以避免引起醫療糾紛。

告知病人之病情時應以本人為原則，病人未明示反對時，亦得告知其配偶與親屬。以本case為例：除告知本人病情外，也一併告知病人家屬。
本case經病理切片檢查為cemento-ossifying fibroma，治療方式為surgical excision，本case採用enucleation的方式清除病灶，使復發率降到最低。
病史詢問、主訴、病灶描述（X-ray、切片檢查）治療計畫等應確實記錄。以呈現完整的治療結果。

在進行手術等具侵犯性治療前，須請病人簽屬同意書，並詳細說明術後可能併發症及預後、術後衛教等。手術過程避免造成不必要醫原性傷害。

不得任意洩漏病人病歷及其相關紀錄。
References

- Monostotic Fibrous Dysplasia: A Case Report Canitezzer et al., Dentistry 2012, 3:2
- Imaging in the Diagnosis of Cemento-ossifying Fibroma: A Case Series; Journal of Clinical Imaging Science; 2012;2:52
Thank you for your attention