口腔病理科
Case Report

報告組別：Intern J 組
報告日期：103.05.27
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組員：陳孟泉、魏祥禮、劉婷瑜、黃羿涵

General Data

- Name: 蔡OO
- Sex: 女
- Age: 56 y/o
- Native: 高雄
- Marital status: 已婚
- Attending V.S.: OOO 醫師
- First visit: 103/01/21

Chief Complaint

Pain over left maxillary area

103/03/31

Present Illness

This 56 years old female suffered from pain over left maxilla, and she came to our OPD for further examination on 103/01/21, she said she had facial trauma on 98/09, treat in 長庚醫院(Left zygoma region,bone graft+ artifical bone),and she arrange CT, bun/cr, SGOT/SGPT examination first. On 103/02/21,patient arrange OP on 103/04/09 and arrange GA routine on 103/03/31.

Past History

- Past Medical History
  - Underlying disease: denied
  - Hospitalization (+)
  - Surgery under GA :denied
  - Denied any drug/food allergieS
- Past Dental History
- General routine dental treatment
- Attitude to dental treatment: co-operative

Personal Habits

- Risk factor related to malignancy

  -Alcohol (-)

  -Betel (-)

  -Cigarette (-)
- Special oral habits: Denied

Intra-Oral Examination

- Size: 0.5 x 1 cm
- Surface: smooth
- Base: sessile
- Shape: dome
- Consistency: unknown
- Color: whitsh
- Pain: positive
- Tenderness: unknown
- Induration: unknown

103/03/31

Panorex Radiography (1)

There is a well defined radiolucency with corticated margin over left maxilla, extending from tooth 26 distal side to the left posterior aspect of tuberosity, and from tooth 27 edentulous ridge to sinus floor, measured approximately 2 x 3 cm in diameter. There are miniplates over superior margin of radiolucency and infraorbital bone.

Panorex Radiography (2)

- Residual root: tooth 15 17 47
- Horizontal impaction: tooth 18
- Caires: tooth 45 46 36 22
- Missing: tooth 27 28 37

Differential Diagnosis

- Inflammation, cyst or neoplasm?
- Benign or malignant?
- Peripheral or intrabony?

Inflammation, cyst or neoplasm?

- Color: Pink(normal) → cyst or neoplasm
- Fever or local heat (-)→ cyst or neoplasm
- Pain(+) → Inflammation
- Consistency(?)
- Fluctuation (?)
- Pus (?)
- Destruction with bony expansion(+) → cyst or neoplasm

--->Cyst or Neoplasm

Benign or malignant?

- Surface (Smooth)→ Benign
- Pain (+)
- Tenderness (+)
- X-ray margin (Well-defined) → Benign
- Duration(?)
- Slow growing (+)→ Benign

→ Benign

Peripheral or intrabony?

- Consistency (Firm to hard)→Intrabony
- X-ray margin (Well-defined)→Intrabony
- Induration (?)
- Bony destruction or expansion (+)
  →Intrabony

→Intrabony

Ameloblastoma (intraosseous)

	Our Case	Ameloblastoma(intraosseous)
Gender	Female	Both
Age	56 y/o	20~70 y/o
Site	Left maxillary tuberosity	Mandible molar-ramus area
Symptom/Sign	Swelling and pain	Rare pain or parethesia
Effects on tooth	Bony destruction and expansion and with mild root resorption	Adjacent teeth displaced, loosened, often resorbed, extensive expansion in all directions

Working diagnosis - Intrabony benign tumor or cyst

- Keratocystic odontogenic tumor
- Ameloblastoma (intraosseous)
- Odontogenic myxoma
- Ameloblastic fibroma
- Central giant cell granuloma

Radiographic features	Our Case	Keratocystic odontogenic tumor
Density	R/L	R/L
Border	Well-defined with corticated margin	Well-defined with corticated margin
Shape	Multilocular	Uni-/Multilocular

Keratocystic odontogenic tumor

	Our Case	Keratocystic odontogenic tumor
Gender	Female	Male>=Female
Age	56 y/o	10~40 y/o
Site	Left maxillary tuberosity	60~80% posterior mandible (Maxillary posterior: 26%)
Symptom/Sign	Swelling and pain	If large→Swelling and pain
Effects on tooth	Bony destruction and expansion and with mild root resorption	Rare root resorption 25~40% with unerupted tooth

Radiographic features	Our Case	Ameloblastoma (intraosseous)
Density	R/L	R/L
Border	Well-defined with corticated margin	Scalloped, well-defined, well-corticated
Shape	Multilocular	Multilocular (soap-bubble or honeycombed)

Odontogenic Myxoma

	Our Case	Odontogenic Myxoma
Gender	Female	No predominant
Age	56 y/o	25-30 y/o
Site	Left maxillary tuberosity	Mandible (Maxillary posterior: 25%)
Symptom/Sign	Swelling and pain	Usually Painless
Effects on tooth	Bony destruction and expansion and with mild root resorption	Bony destruction and expansion Teeth displacement and root resorption

Radiographic features	Our Case	Odontogenic Myxoma
Density	R/L	R/L
Border	Well-defined with corticated margin	Well-defined Not specific
Shape	Multilocular	Unilocular or Multilocular Soap bubble Tennis rocket

Ameloblastic fibroma

	Our Case	Ameloblastic fibroma
Gender	Female	Male>=Female
Age	56 y/o	0~20 y/o
Site	Left maxillary tuberosity	Posterior Mandible (75% unerupted tooth)
Symptom/Sign	Swelling and pain	Painless
Effects on tooth	Bony destruction and expansion and with mild root resorption	Bony expansion & facial swelling

Radiographic features	Our Case	Ameloblastic fibroma
Density	R/L	R/L
Border	Well-defined with corticated margin	Well-defined
Shape	Multilocular	Unilocular or Multilocular (usually combined impacted tooth)

Central Giant Cell Granuloma

	Our Case	Central Giant Cell Granuloma
Gender	Female	Female
Age	56 y/o	< 30 y/o
Site	Left maxillary tuberosity	Anterior mandible Cross the Midline
Symptom/Sign	Swelling and pain	Usually Painless
Effects on tooth	Bony destruction and expansion and with mild root resorption	Unspecific

Radiographic features	Our Case	Central Giant Cell Granuloma
Density	R/L	R/L
Border	Well-defined with corticated margin	Well-defined Non-corticated
Shape	Multilocular	Unilocular or Multilocular

Clinical Impression

Keratocystic odontogenic tumor, left tuberosity

Histological Pathologic Report

- Pathologic diagnosis:
  - Bone, maxilla, tooth 24,25,26,27 apical area, cystic enucleation , keratocystic odontogenic tumor
- Microscopic Examination:
  - Microscopically, it shows keratocystic odontogenic tumor.

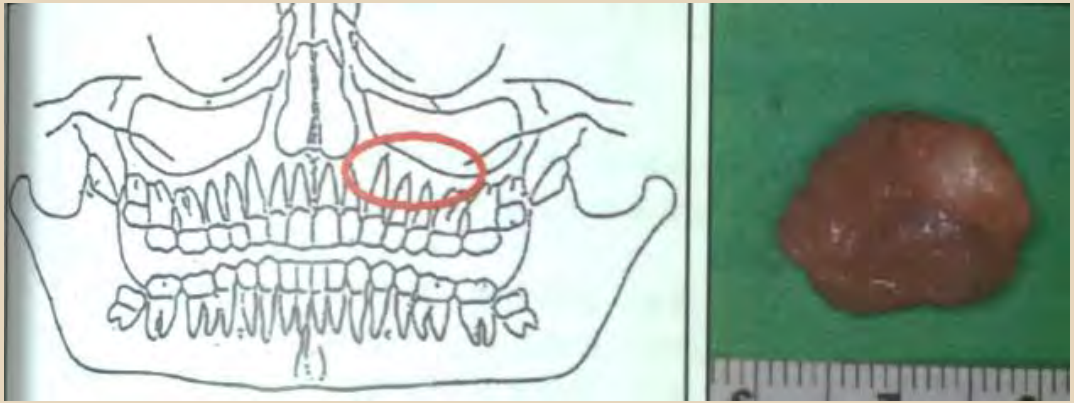
Treatment procedure

- Fist visit at OS(103/01/21)
  - Taked pano film
  - Arranged CT scan on 103/02/13

- OS(103/02/21)
  - Arranged OP schedule on (103/04/09)

- OS(103/03/31)
  - Asked for left maxillary lesion excision
  - GA routine

- OP procedure(103/04/09)
  - Cyst enucleation in sinus+15,16,17,35,36,38,47 ext.



- OS (103/04/18)
  - OP wound f/u
  - Suture removed
  - Check H-P report:Keratocystic odontogenic tumor

Discussion

Keratocystic Odontogenic Tumour

Definition of KCOT

"A benign uni- or multicystic intraosseous tumour of odontogenic origin, with a characteristic lining of parakeratinized stratified squamous epithelium and potentially aggressive, infiltrative behaviour. It may be solitary or multiple. The latter is usually one of the stigmata of the inherited naevoid basal cell carcinoma syndrome (NBCCS)."

Philipsen HP. Keratocy stic odontogenic tum our. In: Barnes L, Ev eson J, Reichart P, Sidransky D, editors. WHO classification of tum ours. Pathology and genetics of tum ours of the head and neck. International Agency for Research on Cancer (IARC) Ly on: 2 005; 3 06–3 07 .

Symptoms

- Swelling, pain, or a combination of both(82.4% of all cases)
- No symptoms

Epidemiology

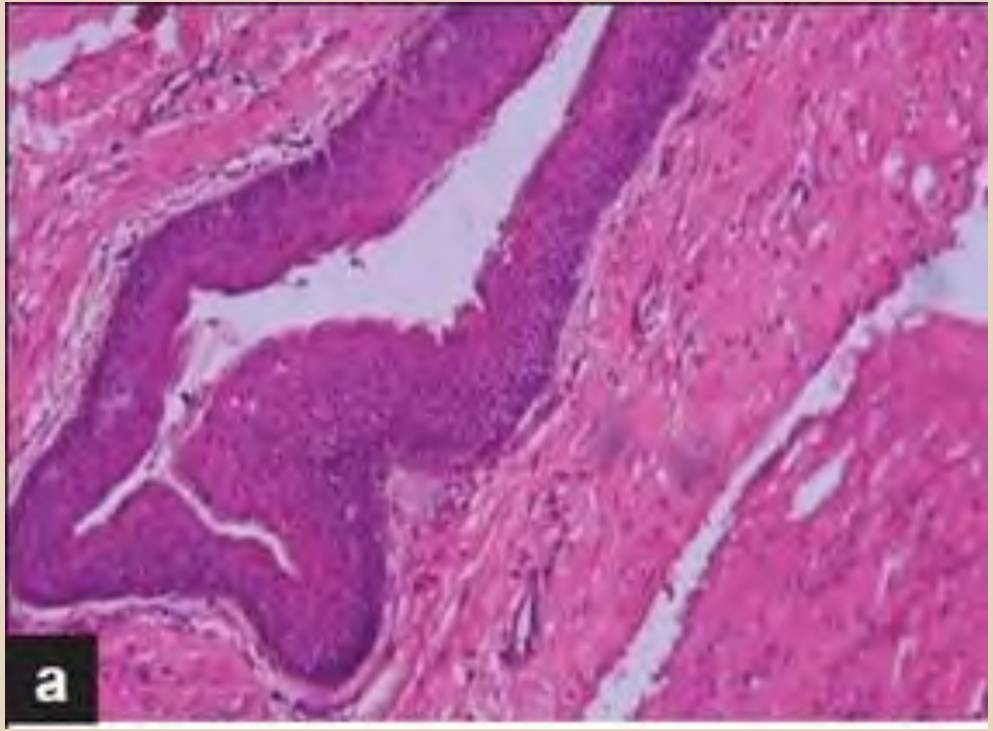
- 4-12% of all odontogenic cysts (often compared to odontogenic cysts even though WHO classifies as tumor)
- Peaks in **second and third decade** of life, but can occur over wide age range
- 90% are **solitary**
- Multiple tumors seen in **Nevoid Basal Cell Carcinoma Syndrome / Gorlin's Syndrome**

Sites

- Mandible (65-85%)
- Most common: posterior mandible
- In some cases, associated with impacted teeth
- Rarely occurs in soft tissue

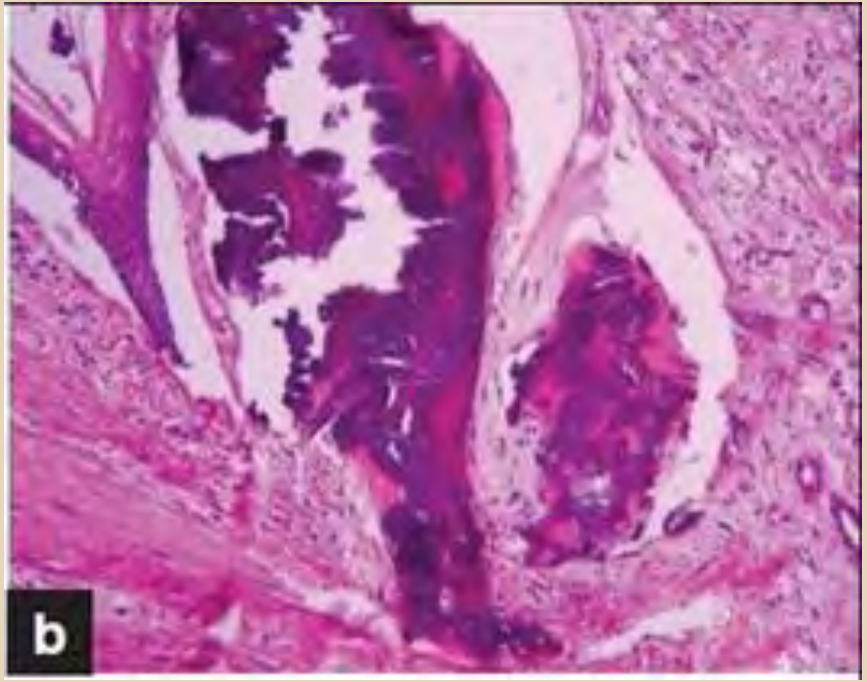
Histopathologic Features

(a) KCOT with typical parakeratinized stratified squamous epithelial lining with corrugated surface (H and E, x20)



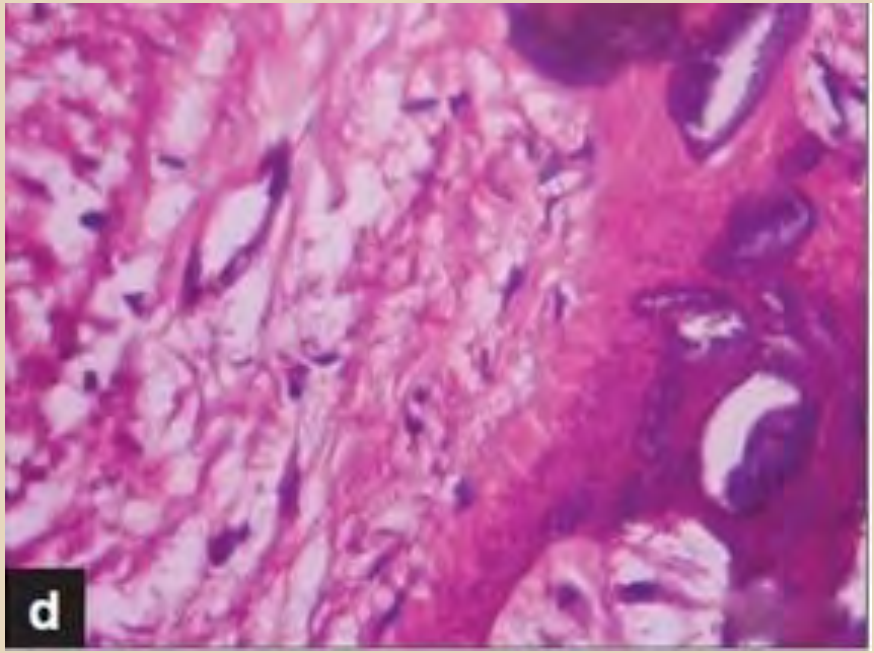
Histopathologic Features

(b) Photomicrograph showing an **irregular eosinophillic mass** and calcospherulite type of mineralization in the connective tissue capsule (H and E, x20)



Histopathologic Features

(d) calcospherulite - type of mineralization at higher magnification (H and E, original magnification ×40)

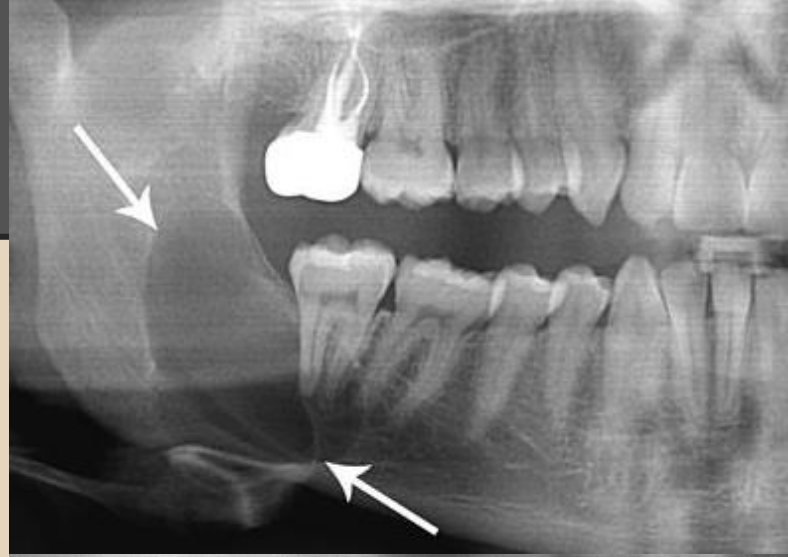


Radiology

- Well-defined unilocular or multilocular radiolucency
- Smooth and often corticated margins
- Unerupted tooth involved(25-40%)
- Tend to grow in anteroposterior direction within the medullary cavity of the bone without causing obvious bone expansion

Radiology

- Small lesions often unilocular radiolucent lesion, variable sclerotic margins
- Larger lesions often multilocular, variable scalloped margins



Panoramic radiograph shows a well-defined unilocular radiolucency in the left mandibular body region

Treament for KCOT

- Decompression alone
- Enucleation with possible curettage
- Chemical curettage with Carnoy’s solution
- Marsupialization
- Resection
- Treatment must balance minimizing recurrence rate with morbidity associated with an extensive resection

Recurrence

Table 3 Summary of treatment related to recurrence rate

Treatment	Lesions	Recurrences	Recurrence rate; %
Enucleation	465	141	30
Enucleation + Carnoy's	122	11	9
Enucleation + peripheral ostectomy	11	2	18
Enucleation + Carnoy's + peripheral ostectomy	83	7	8
Enucleation + cryotherapy	29	11	38
Marsupialization	18	6	33
Marsupialization + cystectomy	108	14	13
Resection	39	0	0

Journal of the Canadian Dental Association . Mar2008, Vol. 74 Issue 2, p165-165h. 9p. 11 Black and White Photographs, 3 Diagrams, 3 Charts, a4 Graphs.

Prognostic factors

- Recurrence rates of 20% to 56% with enucleation alone
- Resection is widely reported to have no recurrences, but may be considered excessive for a benign entity
- Multiple lesions can occur when associated with Gorlin’s Syndrome / Nevoid Basal Cell Carcinoma Syndrome

Reference

1. Philipsen HP. Keratocy stic odontogenic tum our. In: Barnes L, Ev eson J, Reichart P, Sidransky D, editors. WHO classification of tum ours. Pathology and genetics of tum ours of the head and neck. International Agency for Research on Cancer (IARC) Ly on: 2 005; 3 06–3 07 .
2. Myoung H, Hong S-P, Hong S-D, Lee J-I, Lim C-Y, Choung P-H, Lee J-H, Choi J-Y, Seo B-M, Kim M-J. Odontogenic keratocyst: review of 256 cases for recurrence and clinicopathologic parameters. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2001;91:328-33.
3. White SC, Pharoah MJ. Oral Radiology . Principles and interpretation. St Louis, Mosby , 2 009, 3 51 –3 556 edn.
4. Naveen F, Tippu SR, Girish K L, Kalra M, Desai V. Maxillary keratocystic odontogenic tumor with calcifications: A review and case report. J Oral Maxillofac Pathol 2011;15:295-8
5. Brannon R.B. The odontogenic keratocy st: a clinicopathologic study of 312 cases. Part II: Histologic features. Oral Surg. Oral Med. Oral Pathol.1977;43:233–255.
6. Three-dimensıonal cone-beam computed tomography for diagnosıs of keratocystic odontogenic tumours; Evaluation of four cases. Koçak-Berberoğlu H, Çakarer S, Brkić A, Gürkan-Koseoglu B, Altuğ-Aydil B, Keskin C - Med Oral Patol Oral Cir Bucal (2012)
7. Madras, Jonathan; Lapointe, Henry: Keratocystic Odontogenic Tumour: Reclassification of the Odontogenic Keratocyst from Cyst to Tumour.
8. Journal of the Canadian Dental Association . Mar2008, Vol. 74 Issue 2, p165-165h. 9p. 11 Black and White Photographs, 3 Diagrams, 3 Charts, 4 Graphs.

醫學倫理討論

Tom Beauchamp & James Childress
六大原則 - 1979

1. 行善原則(Beneficence)，亦即醫師要盡其所能延長病人之生命且減輕病人之痛苦。
2. 誠信原則(Veractity)，亦即醫師對其病人有「以誠信相對待」的義務。
3. 自主原則(Autonomy)，亦即病患對其己身之診療決定的自主權必須得到醫師的尊重。
4. 不傷害原則(Nonmaleficence)，亦即醫師要盡其所能避免病人承受不必要的身心傷害。
5. 保密原則(Confidentiality)，亦即醫師對病人的病情負有保密的責任。
6. 公義原則(Justice)，亦即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。

行善原則(Beneficence)

符合行善原則：

- 發現病灶後在短時間內即安排手術移除
- 拔除所有預後不好的牙齒

誠信原則(Veractity)

符合誠信原則：

- 誠實的告知病人疾病的嚴重程度，盡告知的義務
- 術前解釋清楚疾病病程、治療計畫、預後、風險
- 讓病人了解牙齒拔除後會有假牙製作的考量
- 六年前骨折在長庚開刀時是否已發現這個病灶而未告知？？

自主原則(Autonomy)

符合自主原則：

- 詳細說明完手術、麻醉的風險後，確定病人充分了解並讓病人自主選擇是否接受治療
- 是否要一併拔除預後差的牙齒

不傷害原則(Nonmaleficence)

符合不傷害原則：

- 術中盡量避免造成不必要的醫源性傷害
- 詳實告知病人疾病治療的狀況，以減輕病人的心理壓力

保密原則(Confidentiality)

符合保密原則：

- 有告知病人疾病狀況

公義原則(Justice)

符合公義原則：

- 確認病灶後即安排住院開刀

醫學倫理總結

- 以不違反醫學倫理原則下進行治療
- 詳實告知病情，積極處置，不延宕治療
- 手術風險務必讓病人充分了解，並和病人討論拔除多顆牙齒後的後續假牙製作考量

THANKS FOR YOU ATTENTION!