

# OM Case Report

## A case of dentigerous cyst

報告人: Int. J組  
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20150526

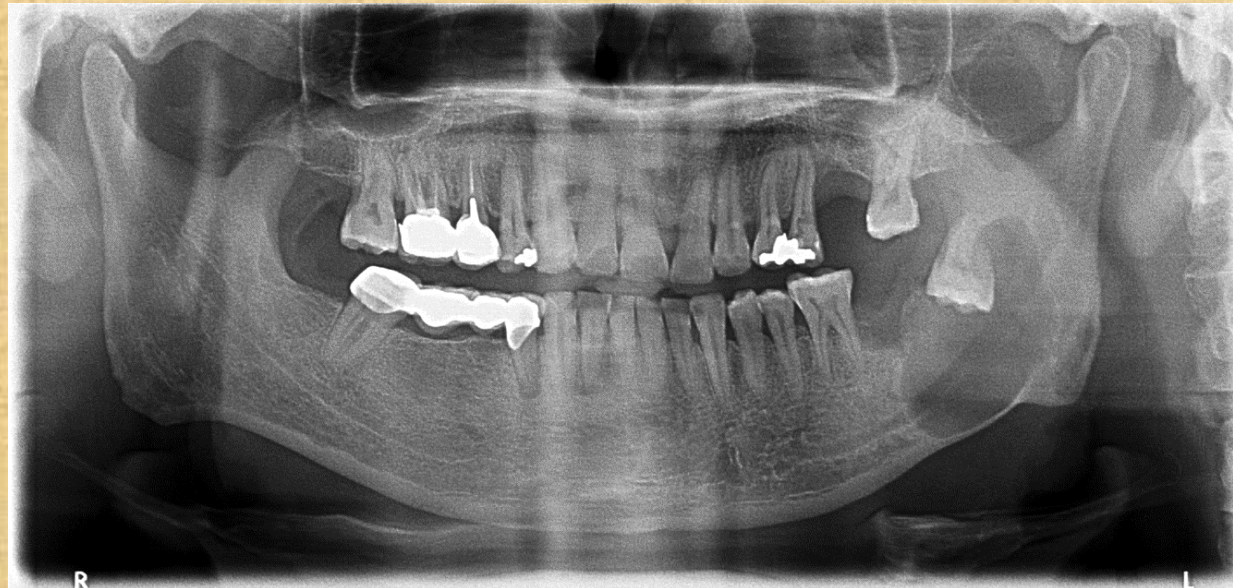
指導醫師: 陳玉昆主任 林立民教授

# General data

- ▶ Name: X X X
- ▶ Sex: Male
- ▶ Age: 54
- ▶ Native: 高雄
- ▶ Marital status: Married
- ▶ First visit: 104.04.29
- ▶ Attending staff: X X X醫師

# Chief Complaint

- ▶ Referred from 802 hospital Dr. X X X for mass over left mandibular body area for a period.



# Present illness

- ▶ 802 hospital

- This 54 y/o male complaint about a mass over left mandible and was referred from 802 hospital Dr. X X X for mass over left mandibular body area for a period.

# Past History

## ▶ Past Medical History

- ▶ Drug and food allergy: (-)
- ▶ Systemic disease: DM(+), HbA1c =7
- ▶ Hospitalization: (+), 乳突瘤
- ▶ Surgery under GA: (+)

## ▶ Past Dental History

- ▶ General routine dental treatment
- ▶ Attitude to dental treatment: co-operative

# Personal History

- ▶ Cigarette smoking (+)
- ▶ Alcohol drinking (-)
- ▶ Betel-quid chewing (-)

# Extraoral examination

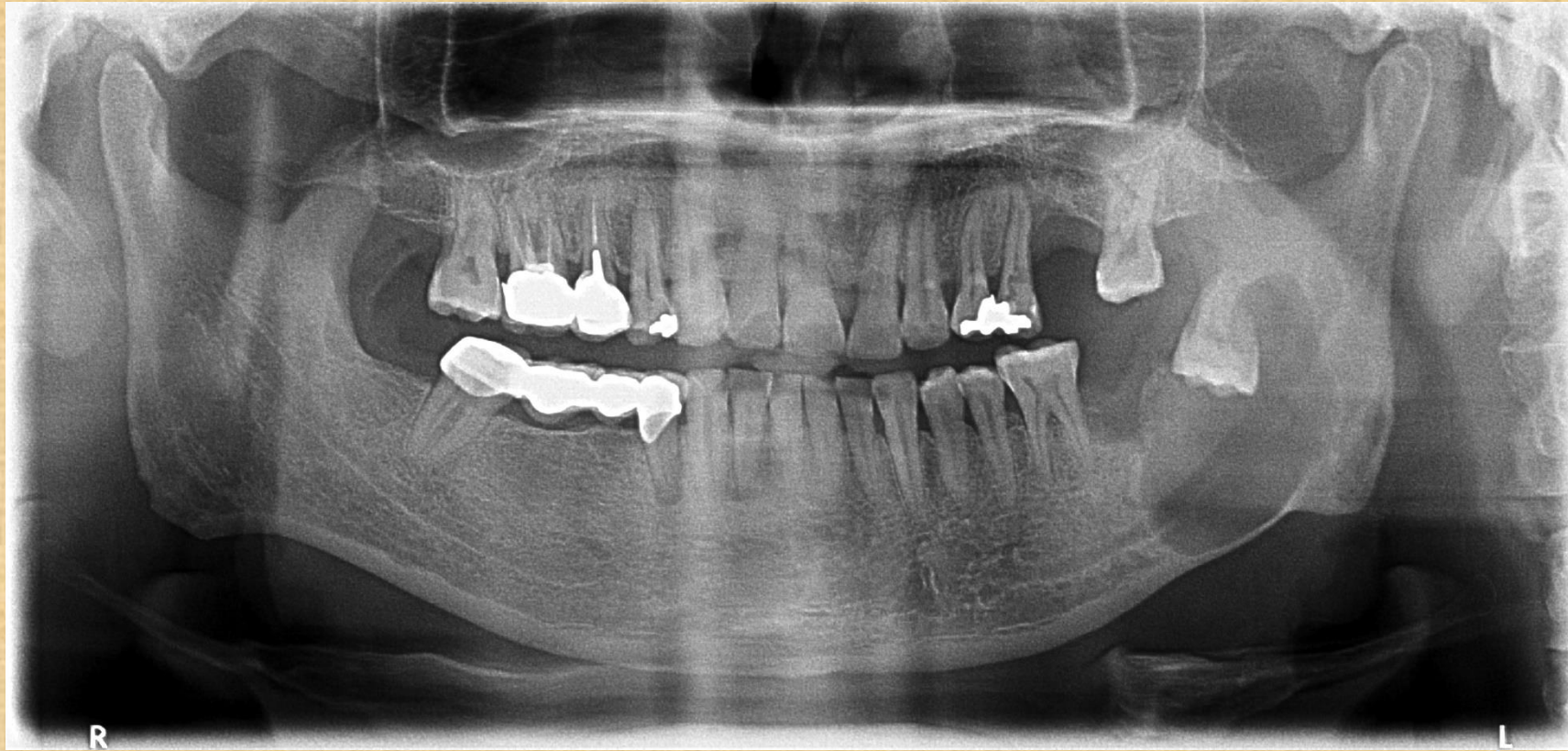
- ▶ Facial asymmetry: (+), outer skin with mass over auricular area
- ▶ Swelling: (-)
- ▶ Fluctuation(+)
- ▶ Tenderness(-)

# Intraoral examination

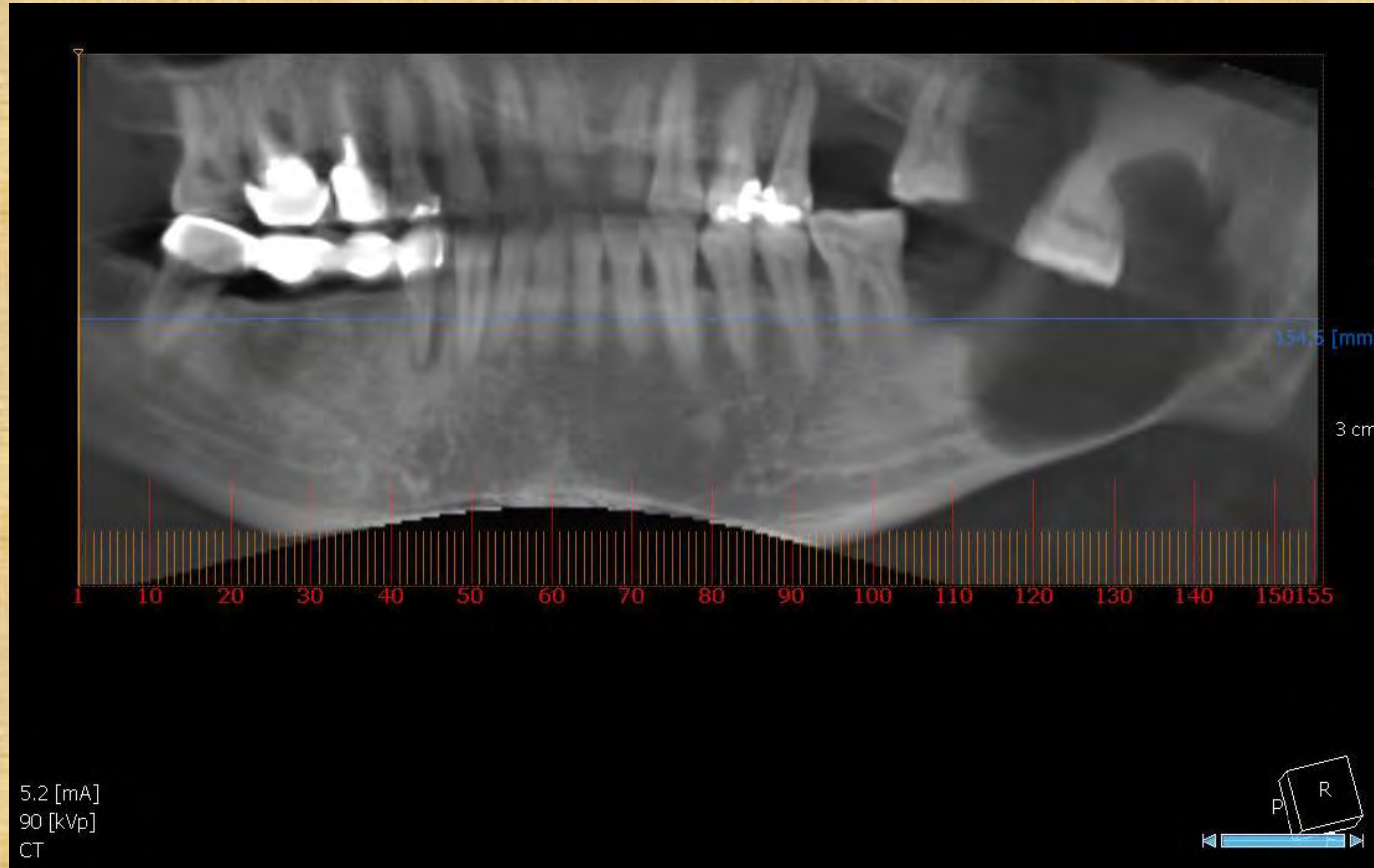
- ▶ Lesion:
  - ▶ Overlying mucosa: Normal
  - ▶ Expansion of mandible (+), ascending ramus deformation
  - ▶ Palpation pain (-)
- ▶ Lower lip numbness (-)



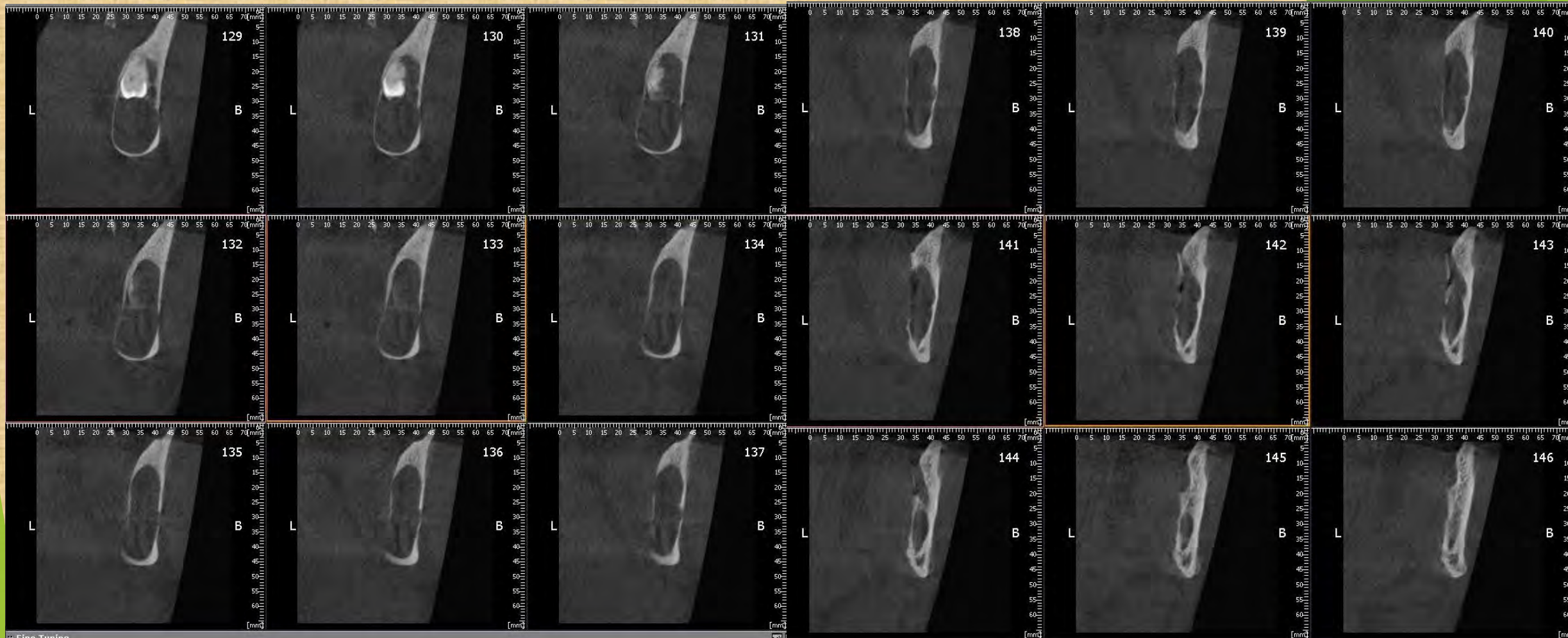
# X-ray finding



# CBCT

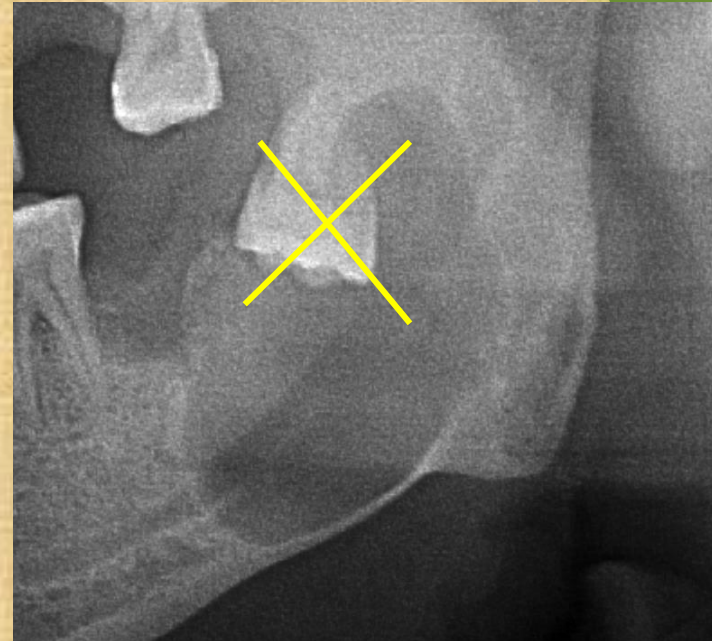


# CBCT



# X-ray finding

- ▶ Lesion:
  - ▶ Site:  
Left molar region up to ramus of mandible
  - ▶ Maximum dimension: 4 x 3 x cm
  - ▶ Shape: ovoid
  - ▶ Radiodensity: unilocular radiolucency



104.04.29

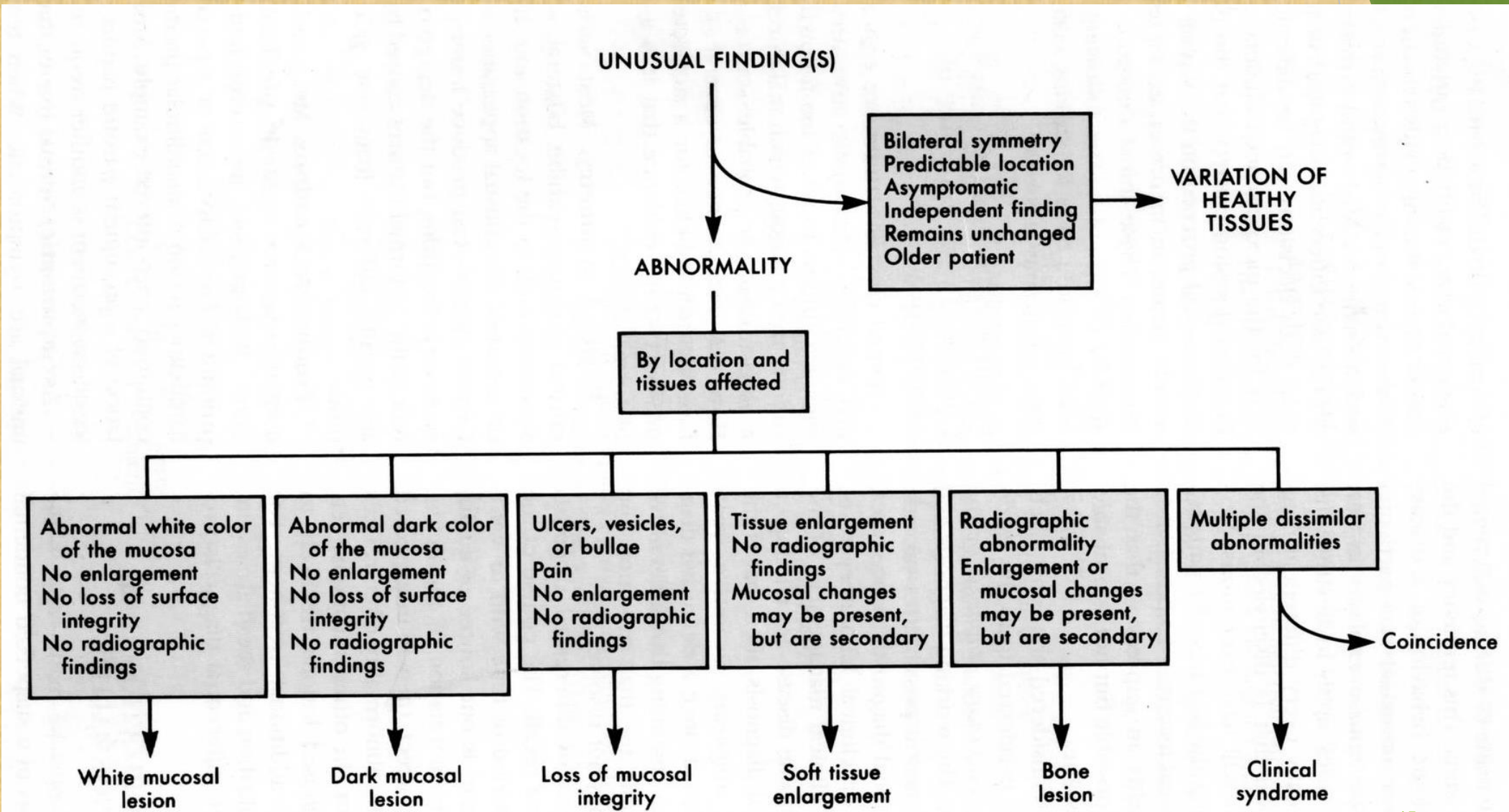
# X-ray finding

- ▶ Border: well-defined with corticated margin
- ▶ Internal structure: unilocular radiolucency image
- ▶ Effect on surrounding structure: displacement and inverted embedded tooth 38, surrounding the left mandibular canal



# Differential diagnosis

# Differential diagnosis



# Peripheral or Intrabony?

	Our case	Peripheral	Intrabony
Mucosal lesion	-	+	-
Induration	-	+	-
Bony expansion	-	-	+/-
Cortical bone destruction	-	-	+/-

→ Intrabony



# Inflammation, Cyst or Neoplasm?

	Our case	Inflammation
Redness	-	+
Swelling	-	+
Local heat	-	+
Pain	-	+

→ Cyst or Neoplasm

# Cyst or Neoplasm?

	Our case	Cyst
Aspiration	Unknown	+
Fluctuation	+	+/-
Well-defined border	+	+
Bony expansion	+	+/-

	Our case	Inflammation cyst	Non-inflammation cyst
Pain, tenderness	-	+	-
Local heat	-	+	-
Color	Pink	Reddish	Pink
Progression	Slow	Fast	Slow
Sclerotic margin	+	-	+

→ Non-inflammation cyst

	Our case	Benign	Malignant
Border	Well-defined	Well-defined	Ill-defined
Sclerotic margin	+	+	-
Destruction of cortical margin	-	+/-	+
Pain	-	-	+
Induration	-	-	+
Swelling with intact epithelium	+	+	-
Progress	Slow	Slow	Fast
Metastasis	Unknown	-	+/-

→ Non-inflammation cyst or Benign tumor

# Differential diagnosis

- ▶ Well -defined
- ▶ Unilocular radiolucency
- ▶ Posterior mandible
- ▶ Old age

# Differential diagnosis

- ▶ Dentigerous cyst
- ▶ Odontogenic keratocyst
- ▶ Unicystic ameloblastoma

# Working diagnosis

	Our case	Dentigerous cyst
sex	male	Male >female
Age	54	10~30
Site	Left mandibular molar area	<b>Mandible (3 rd molar)</b>
S/S	no	Usually asymptom, <b>swelling or pain if infected,</b>
size	4x3 cm in diameter	Average size 3cm~4cm
X-ray features	well-defined unilocular ovoid shaped radiolucency with a sclerotic margins	<b>well-defined, smooth, unilocular, corticated margin, impacted tooth</b>
Clinical features	Color: pink Pain(-)	<b>Color: pink Pain(-)</b>

	Our case	Odontogenic keratocyst
sex	male	male
Age	54	10~40 yrs(60%)
Site	Left mandibular molar area	Posterior Mandibular, Mostly molar area(49%)
S/S	no	usually asymptomatic Large: pain, swelling or drainage.
size	4x3 cm in diameter	varies
X-ray features	well-defined unilocular ovoid shaped radiolucency with a sclerotic margins	Well-defined unilocular radiolucent with smooth and often corticated margin 25~40% unerupted tooth involved Root resorption is less common
Clinical features	Color: pink Pain(-)	usually asymptomatic
others	nil	Seldom bone expansion



	Our case	Unicystic ameloblastoma
sex	male	none
Age	54	Young age, ave 23
Site	Right mandibular molar area	Post .Mandible
S/S	no	nil
size	4x3 cm in diameter	Average size 4.3cm~6.3cm
X-ray features	well-defined unilocular ovoid shaped radiolucency with a sclerotic margins	well-defined, smooth, unilocular ,corticated margin
Clinical features	Color: pink Pain(-)	Color: pink Pain(-)

# Clinical Impression

1. Dentigerous cyst, tooth 38

# Treatment Course

- 104.05.18
- ✓ Tooth 38 complicated odontectomy + Incisional biopsy + Decompression button placement insertion
- ▶ 103.05.21:
- ✓ H-p report: Dentigerous cyst



# Treatment Course

- ▶ 104.05.20:
  - ▶ Follow up, N/S irrigation and BI application
- ▶ 104.05.25:
  - ▶ Follow up, N/S irrigation and BI application

# Discussion

Outcome of a Dentigerous Cyst  
following Decompression using a  
Removable Appliance: A Case Report

OHDM-vol.13-No.1-March 2014

Basak Durmus, Barhan Pekel, Faysal Ugurlu, Ilknur Tanboga

# Introduction

- ▶ Dentigerous cysts develop around the unerupted tooth, in the absence of an inflammatory stimulus .
- ▶ Occur frequently in the lower jaws of patients aged 6-12 years.
- ▶ Often asymptomatic

- ▶ Reduced enamel epithelium derived from the tooth-forming organ
- ▶ Radiographic - it appears as a round or void, well-defined unilocular radiolucency surrounding the crown.

- ▶ In this case, managing a large dentigerous cyst in a child using a customised Decompression removable appliance.



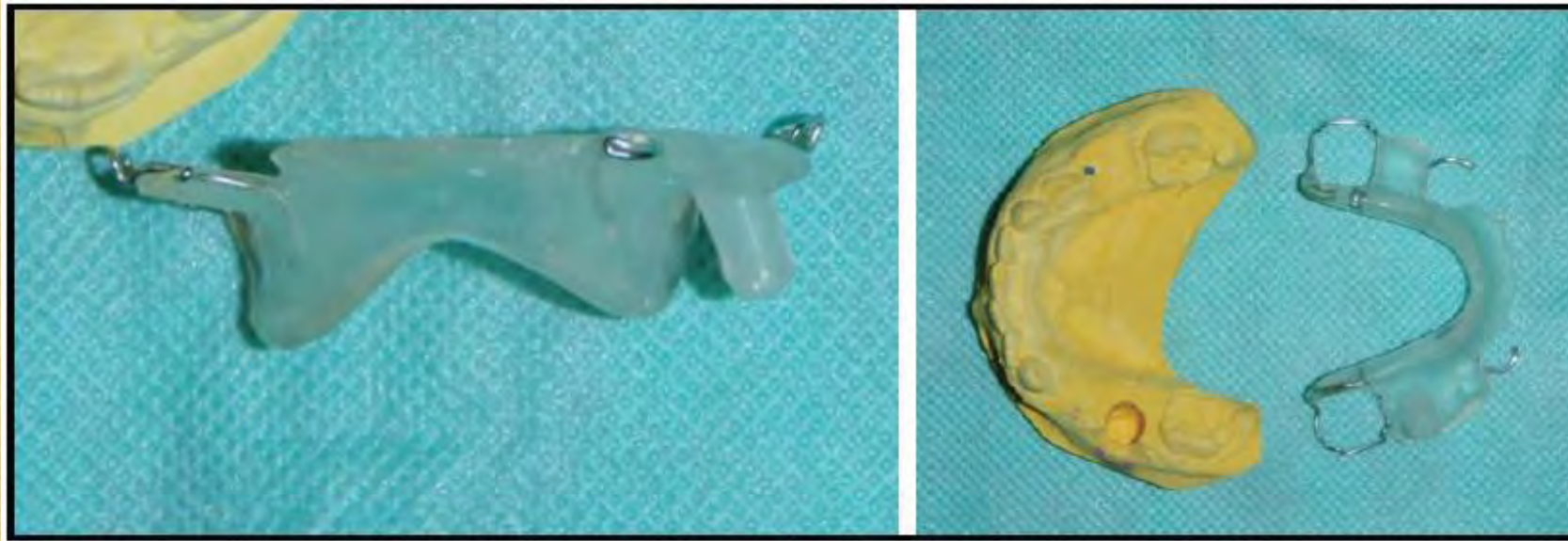
## Case

- ▶ A 7-year-old female, in good general health with no significant medical history.
- ▶ Revealed mixed dentition, swelling in the left mandibular region and tenderness over lower left second primary molar with an amalgam restoration.



- ▶ well-defined unilocular radiolucency approximately 3×3 cm in size under the primary left mandibular molar area extending to the lower border of the mandible.
- ▶ From distal side of the tooth 34 to the mesial side of the tooth 36

- ▶ 2 cm long, 2.5 mm wide hole over the cyst from the lower left second primary molar.

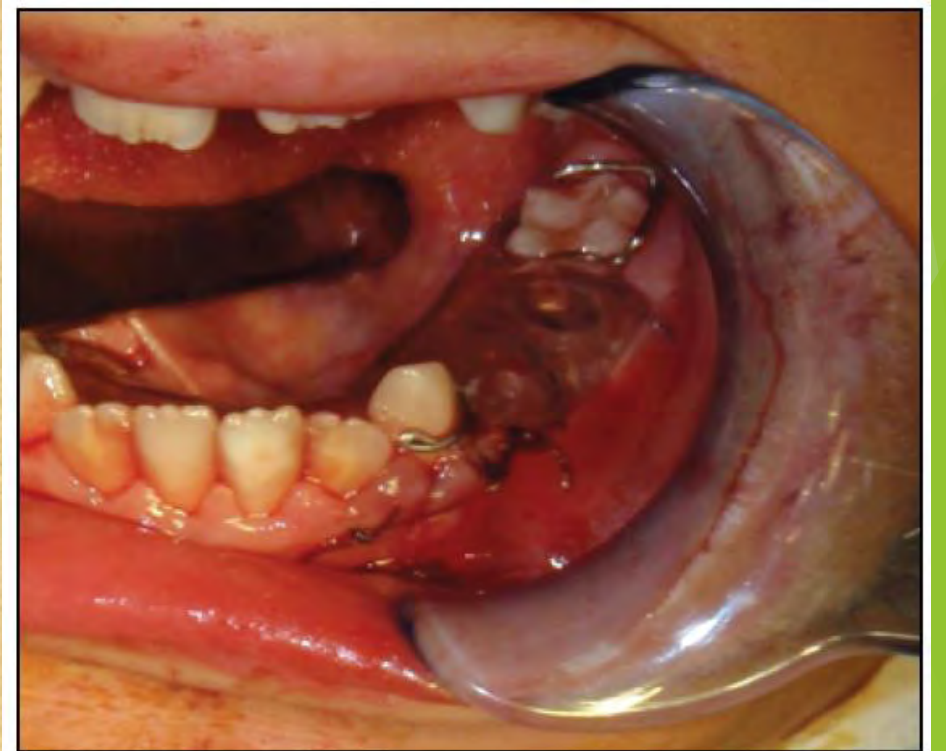


- ▶ the tooth 75 and tooth 35, to which the cystic lumen was attached, were extracted.



- ▶ Histopathology revealed
  - stratified squamous non-keratinized epithelium
  - with a fibrous connective tissue & inflammatory cell.
- ▶ Dentigerous cyst was confirmed postoperatively

- ▶ Resin projection was adjusted to fit the socket of the extracted tooth



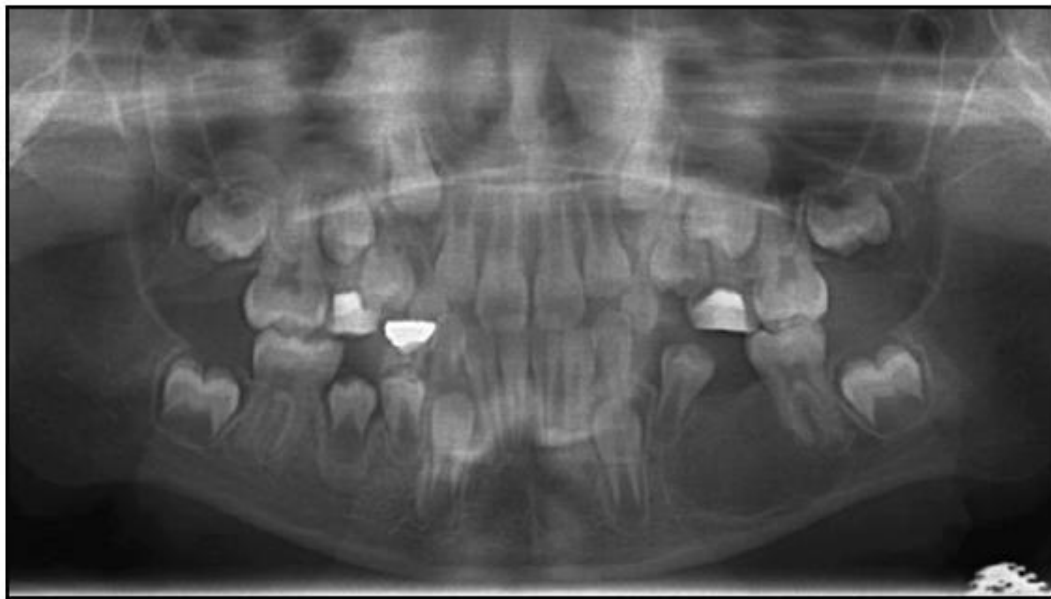
- ▶ Antibiotics and analgesics & irrigation was needed.



*Figure 6. Irrigation of the lesion.*



► 6-monthes follow up



*Figure 7. Panoramic view before second operation after 6-month.*



*Figure 8. Decompression appliance converted to a removable space maintainer.*

- ▶ The bone density increased and bone trabeculation was seen at the end of the first year .



*Figure 9. Increased bone density and bone trabeculation after 1 year.*



*Figure 10. Removable appliance converted to lingual arch.*



*Figure 11. Panoramic view showing successful healing and ossification of the bone defect (2 years postoperatively).*



*Figure 12. Intraoral view showing successful healing.*

# Discussion

- ▶ Marsupialization or decompression is a conservative technique that attempts to relieve the intracystic pressure by creating an accessory cavity.
- ▶ The conservative approach needs a longer healing period and good patient cooperation.

# Discussion

- ▶ It has marked advantages:
  - ▶ it is minimally invasive
  - ▶ there are no severe complications (infection)
  - ▶ it conserves bone and important anatomic structures (inferior alveolar nerve and mandibular canal)

# Discussion

- ▶ In comparison with traditional decompression techniques, this case used a customised appliance.

# Discussion

- ▶ It was easy to apply.
- ▶ The patient or his/her parents can irrigate the area
- ▶ Daily recalls are not necessary.
- ▶ It can be converted into a space retainer to prevent space loss

# Discussion

- ▶ The resin projection of the appliance was used to decompress the cystic lesion and to prevent the entry of food debris into the cyst cavity. It also prevented the formation of fibrous tissues.
- ▶ The appliance was not used only as an obturator; it also served as a space maintainer.



# Discussion

- ▶ The cooperation of the patient and parents was fundamental to the success of the treatment, as they complied with the postoperative oral hygiene measures fully.

# Conclusion

- ▶ Conservative treatment is a useful treatment for an extensive dentigerous cyst.
- ▶ Depending on the size and location of the dentigerous cyst, the age of the patient, and relationship to vital structures

# Reference

- ▶ Oral and maxillofacial pathology ,Third edition, Neville Damn Allen Bouquot
- ▶ Outcome of a Dentigerous Cyst following Decompression using a Removable Appliance: A Case Report, Basak Durmus, Barhan Pekel, Faysal Ugurlu, Ilknur Tanboga

# 醫學倫理討論

# 醫學倫理

- ▶ 生命的神聖性(Sanctity of life)
- ▶ 六大原則

# Tom Beauchamp & James Childress

## 六大原則 - 1979

1. **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。
2. **誠信原則(Veracity)**:醫師對其病人有「以誠信相對待」的義務。
3. **自主原則(Autonomy)**: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)**: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)**:醫師對病人的病情負有保密的責任。
6. **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。

# 行善原則

- ▶ **Decompression** 的做法能降低二次手術危險

## 誠信原則

- ▶ 對於患者的疾病**嚴重程度**是否有確實地通知，盡到告知的義務？
- ▶ 是否有清楚的向病人說明清楚疾病病程、治療計畫、預後、風險？  
→ 皆以已告知病人後，經同意才進行手術。



## 自主原則

- ▶ 充分說明病情及治療計畫、風險之後，是否有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。

# 不傷害原則

- ▶ 是否有先完整瞭解病人的病史？
  - 治療前有完整蒐集病史資料，並與病患溝通後擬定進一步的治療計畫
- ▶ 手術過程中，是否有造成不必要的醫源性的傷害？
  - 沒有不必要醫源性傷害。

# 保密原則

## 告知的對象

1. 本人為原則
2. 病人未明示反對時，亦得告知其配偶與親屬
3. 病人為未成年人時，亦須告知其法定代理人
4. 若病人意識不清或無決定能力, 應須告知其法定代理人、配偶、親屬或關係人
5. 病人得以書面敘明僅向特定之人告知或對特定對象不予告知

# 公義原則

## ▶ 手術的必要性？

→ Dentigerous cyst最佳的治療方式是 surgical excision，將病灶完整的清除 (enucleation)才能將復發率(recurrence rate) 降到最低。Decompression 降低手術難度及併發症

## 醫學倫理總結

- ▶ 在病例撰寫方面(病兆描述,治療計畫,病人態度)應書寫詳盡，使治療過程有詳實的記錄及治療順利。
- ▶ 在進行治療之前,須請病人簽屬同意書
- ▶ 應在不違反醫學倫理的原則之下進行治療的行為

**THANK YOU FOR YOUR ATTENTION!**