

Case Report

報告人: INT. H組
陳佳琪 盛毓為 林典芸 蔡文聖
指導醫師: 陳玉昆主任 林立民教授



General data

- Name: O O O
- Sex: Male
- Age: 13
- Native: 高雄
- Marital status: unmarried
- First visit: 103.08.12
- Attending staff: O O O醫師



Chief Complaint

- Referred from local dental clinic for radiolucent image on right mandible molar area.



103.08.12

Present illness

- Local dental clinic
 - Went to LDC for orthodontic treatment. The doctor took panoramic x-ray and noticed a radiolucent image on un-erupted teeth 47, 48 area. Therefore, the doctor suggested patient to our OS OPD for further evaluation and treatment.



Past History

- Past Medical History
 - Drug and food allergy: (-)
 - Systemic disease: (-)
 - Hospitalization: (-)
 - Surgery under GA: (-)
- Past Dental History
 - General routine dental treatment
 - Attitude to dental treatment: co-operative



Personal History

- Denied any other dental oral habits



Extraoral examination

- Facial asymmetry: (-)
- Swelling: (-)
- MMO: 46mm



Intraoral examination

- Lesion:
 - Overlying mucosa: normal
 - Expansion of mandible: (-)
 - Pain history: (-)
 - Palpation pain: (-)
- Lower lip numbness (-)



X-ray finding



103.08.12

X-ray finding

- Lesion:

- Site:

- right molar region of mandible

- Size: 23.8 X 20 mm

- Shape: ovoid

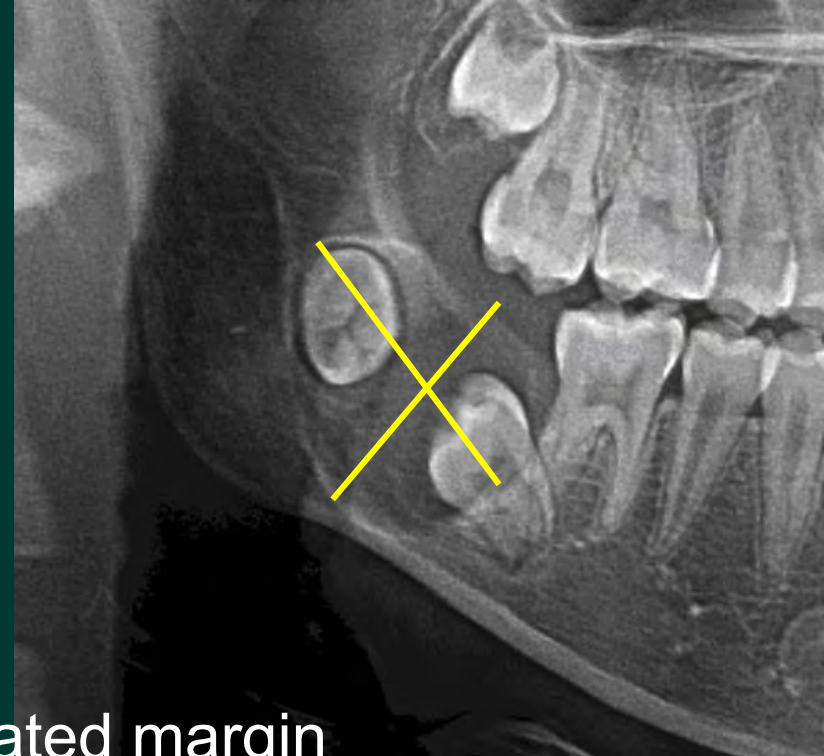
- Radiodensity: radiolucency

- Border: well-defined with corticated margin

- Internal structure: unilocular

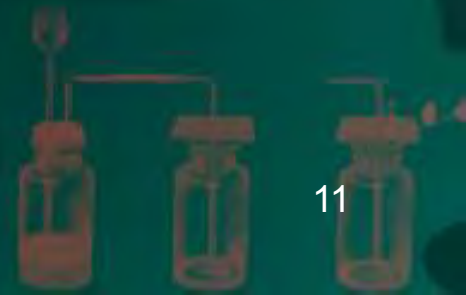
- Effect on surrounding structure: displacement and impaction of teeth 47,48

- downward displacement of mandibular canal



103.08.12

Differential diagnosis



Peripheral or Intrabony?

	Our case	Peripheral	Intrabony
Mucosal lesion	-	+	-
Induration	Unknown	+	-
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	+	-	+

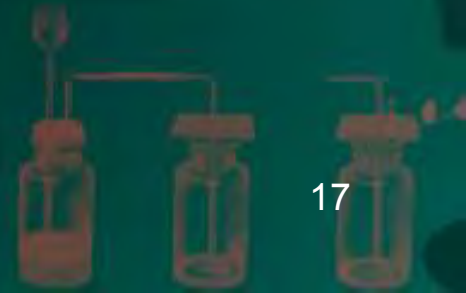
→ **Non-inflammation cyst**

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

→ **Non-inflammation cyst or Benign tumor**

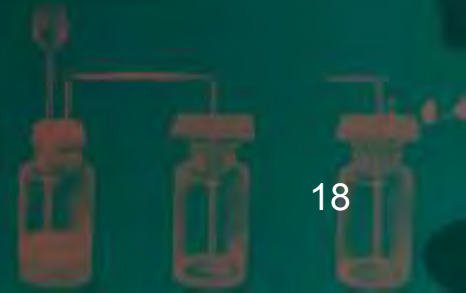
Differential diagnosis

- Well –defined
- Unilocular radiolucency
- Posterior mandible
- Young age



Differential diagnosis

- Unicystic ameloblastoma
- Dentigerous cyst
- odontogenic keratocyst
- Odontogenic myxoma



Working diagnosis

	Our case	Unicystic amelobalstoma
sex	male	none
Age	13	Young age, ave 23
Site	Right mandibular molar area	Post .Mandible
S/S	no	nil
size	2.3x2 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(-)

	Our case	Dentigerous cyst
sex	male	Male >female
Age	13	10~30
Site	Right mandibular molar area	Mandible (3 rd molar)
S/S	no	Usually asymptom, swelling or pain if infected,
size	2.3x2 cm in diameter	Average size 3cm~4cm
X-ray features	well-defined unilocular ovoid shaped radiolucency with a sclerotic margins	well-defined, smooth, unilocular, corticated margin, impacted tooth
Clinical features	Color: pink Pain(-)	Color: pink Pain(-)

	Our case	Odontogenic keratocyst
sex	male	male
Age	13	10~40 yrs(60%)
Site	Right mandibular molar area	Posterior Mandibular, Mostly molar area(49%)
S/S	no	usually asymptomatic Large: pain, swelling or drainage.
size	2.3x2 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

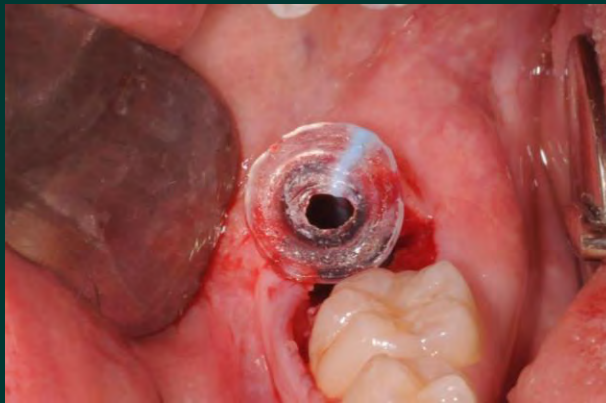
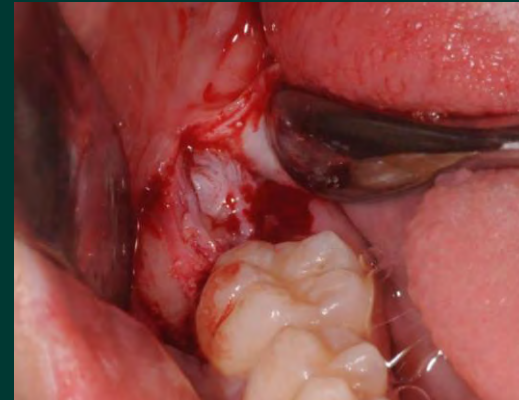
	Our case	Odontogenic myxoma
sex	male	None
Age	13	young adult, (25~30y/o)
Site	Right mandibular molar area	Post. Mandible
S/S	no	asymptomatic
size	2.3x2 cm in diameter	variable
X-ray features	well-defined unilocular ovoid shaped radiolucency with a sclerotic margins	Unilocular or multilocular radiolucency; irregular or scalloped margin; Larger lesions :painless expansion of the involved bone.
Clinical features	Color: pink Pain(-)	asymptomatic
others	mild buccal & lingual bony expansion	May displace or cause resorption of the teeth

Clinical Impression

1. Ameloblastoma
2. Dentigerous cyst

Treatment Course

- 103.08.12:
 - ✓ incisional biopsy & decompression button insertion



Treatment Course

- 103.08.18:
 - ✓ H-p report: **unicystic ameloblastoma**
- 103.08.23, 103.09.16, 103.11.11, 104.01.16
 - ✓ Follow up and N/S irrigation



103.02.01

Size: 22.8 X 20.7 mm



Pre-operation treatment



- 103.08.12

- Size: 23.8 X 20 mm

- 104.02.04

- Size: 21.3 X 11.7 mm

- Tooth movement

- Lower border bone density ↑

Treatment Course

- 104.02.04:
 - ✓ Follow up and examination
 - ✓ Arranged operation under GA on 104.02.13



103.08.12



104.02.07

Treatment plan

- Operation under GA on 104.02.13:
 - Excision + bone trimmy + tooth 38,47,48 surgical extraction

Post-operation x-ray



104.02.14

H-P report

- Pathologic diagnosis:
 - Bone, mandible, tooth 48 apical area, excision, ameloblastoma follicular

Discussion-

Treatment of an extensive unicystic ameloblastoma in a 7-year-old child: the best approach?

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- **Introduction**
- **Case report**
- **Discussion**



Introduction

- Ameloblastoma is a benign, locally-invasive neoplasm that consists of proliferating odontogenic epithelium.
- Unicystic ameloblastomas
 - relatively younger age
 - typically unilocular on radiography
 - macroscopically cystic in nature
 - respond better to conservative treatment
- In children resection causes important functional and aesthetic damage as a result of alterations to craniofacial development.

Case report

- Age: 7
- Sex: female
- Site: right body and ramus of the mandible
- Symptom : pain(-), tenderness(-),
dysphagia(-), dysphonia(-), dyspnoea(-),
trauma(-)

Case report

- On examination there was a large, well-circumscribed mass in the right body and ramus of the mandible, covered with normal mucosa, which measured $11 \times 6 \times 4$ cm. There were no local skin changes, and palpation indicated a well-circumscribed, painless, and hard lesion.

Case report

- a well-defined, unilocular, hypodense lesion that extended from the posterior body to the right condyle .



Fig. 1. A panoramic radiograph showing the presence of an extensive radiolucent area involving the right mandibular body, ramus, and condyle suggestive of a cystic lesion.

Case report

- needle aspiration of which produced a yellowish liquid.

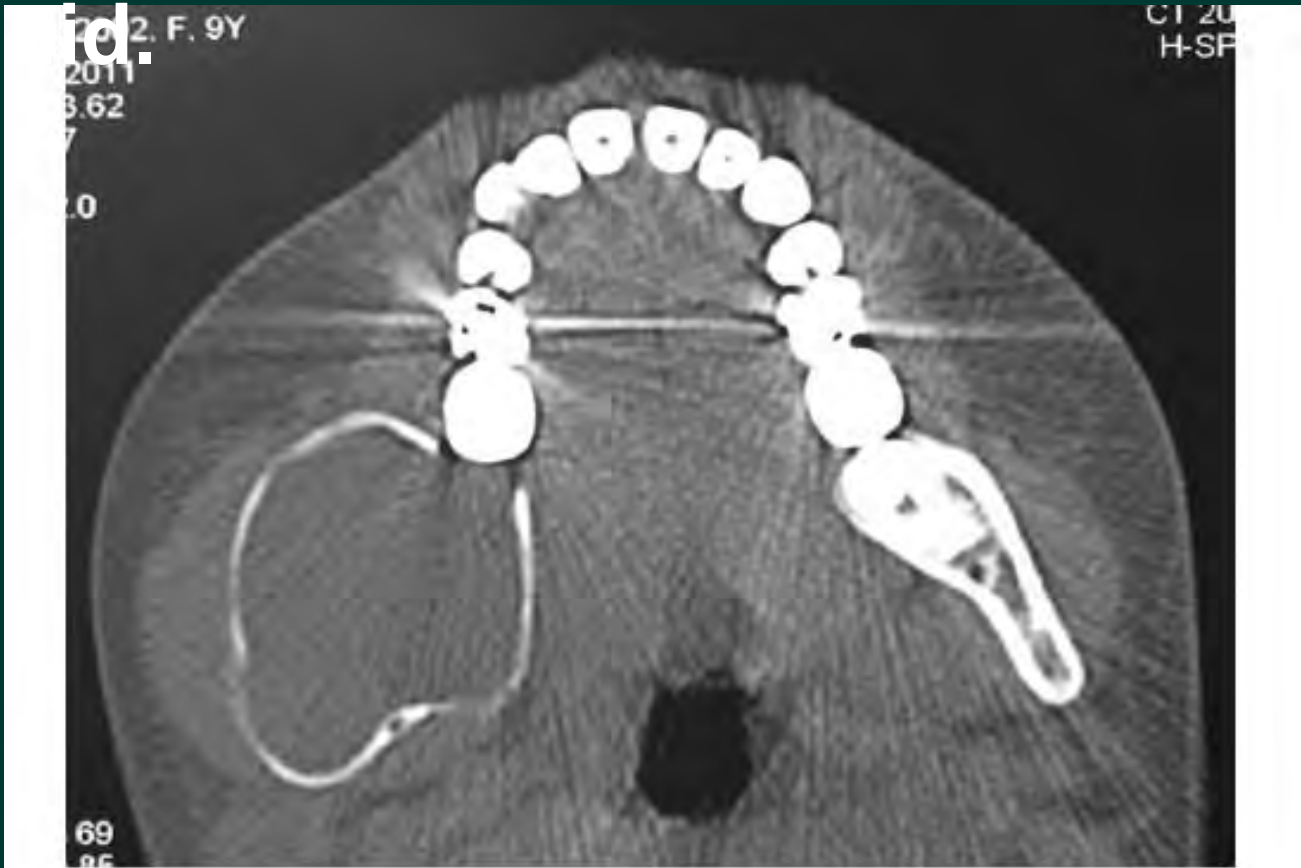


Fig. 2. Computed tomographic image showing the expansion of the buccal and lingual cortical bone affecting the body, ramus, and mandibular condyle.

Case report

- Provisional diagnosis: cystic lesion
- Treatment: Marsupialisation
 - considering the extent of the lesion and involvement of the condyle.
 - Under local anaesthesia, fragments of the mucosa and cystic capsule were removed and the remainder was sutured around the entire surgical window to maintain a permanent communication between the lumen and the oral cavity.



Case report

- Histopathological examination:
 - cystic lining with preameloblast-like tall columnar cells in the basal layer.
 - There was intraluminal proliferation of the odontogenic epithelium in a plexiform pattern
- Diagnosis: Unicystic ameloblastoma



Case report

- Twenty months after marsupialisation
 - her facial asymmetry had regressed
 - signs of remodelling of the mandibular bone
- Under general anaesthesia and through an intraoral approach the remainder of the lesion was completely enucleated, with peripheral osteotomy to ensure complete removal of the margins.
- No adjuvant treatment was given



Case report



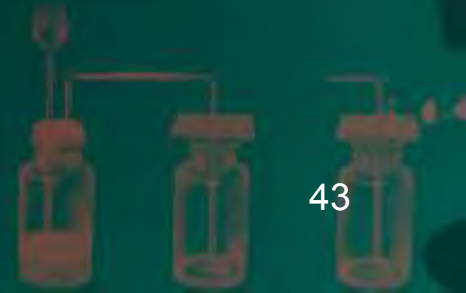
Fig. 3. Advanced bone remodelling at 36-months' follow-up showing no signs of relapse; remodelling is visible.

Discussion

- The treatment of unicystic ameloblastoma
 - Radical treatment : resection of the lesion followed by insertion of reconstructive plates
 - Condylar prosthesis
 - Resection of the mandibular condyle in children can cause appreciable dentofacial deformities, which may result in impairment of mastication, swallowing, speech, and facial symmetry, which directly influences their quality of life.

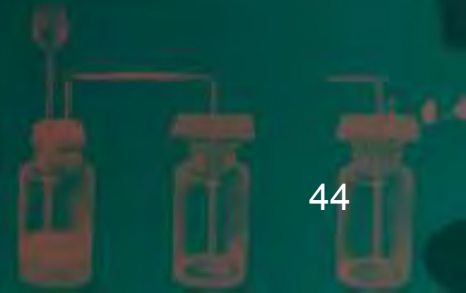
Discussion

- The treatment of unicystic ameloblastoma
 - Conservative treatment:
 - enucleation followed by application of Carnoy's solution
 - marsupialisation followed by enucleation
 - Marsupialisation can be effective, as it preserves the mandibular contour and growth, particularly when the condyle is affected by tumour.
 - In this case the mandible started to remodel by 36 months, and there were no signs of recurrence.



Discussion

- Lau and Samman reported that the recurrence rates for unicystic ameloblastomas
 - 3.6% after resection
 - 30.5% after enucleation alone
 - 16% after enucleation followed by application of Carnoy's solution
 - 18% after marsupialisation with or without further treatment



Discussion

- Seintou et al reported a recurrence rate
 - 29.4% after enucleation or excision
 - several other series have shown that resection is the treatment followed by the lowest recurrence rate
- However, the recurrence rates after marsupialisation cannot be considered to be high, and the management is less invasive.
- The mean period to recurrence reported by some studies is five years, which suggests that all patients should be followed up in the longterm.



Discussion

- Resection seems to be excessive for unicystic ameloblastoma, which behaves much better than the solid variant, and in children the conservative approach offers good aesthetic results and maintains their craniofacial development.
- The question that remains is whether the treatment that offers the lowest rate of recurrence is the best for children.

Discussion-

Management of unicystic ameloblastoma of the mandible in a 5-year old child

[Ongkila Bhutia](#), [Ajoy Roychoudhury](#), [Ankit Arora](#), and [Saumya Mallick](#)

Natl J Maxillofac Surg. 2013 Jul-Dec; 4(2): 232–234.

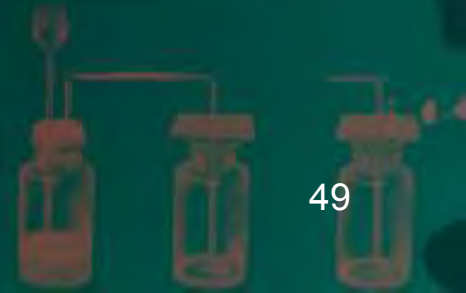
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Introduction

- Unicystic ameloblastoma (UA) was first described by Robinson and Martinez in 1977 as a special type of ameloblastoma
- rarely seen in first decade
- usually appears very similar to a non-neoplastic odontogenic cyst and is frequently clinically misdiagnosed as dentigerous cyst
- histological confirmation is mandatory
- Needs different treatment approach and long term follow-up due to its chances of recurrence

Introduction

- Unicystic ameloblastoma (UA) was first described by Robinson and Martinez in 1977 as a special type of ameloblastoma

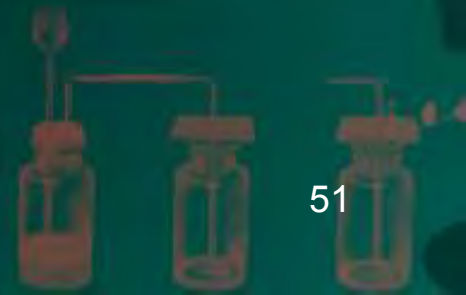


Case report

- A 5-year-old boy presented to our unit Center for Dental Education and Research, All India Institute of Medical Sciences, New Delhi, India
- Chief complaint: painless hard swelling in the lower chin region of 3 months duration

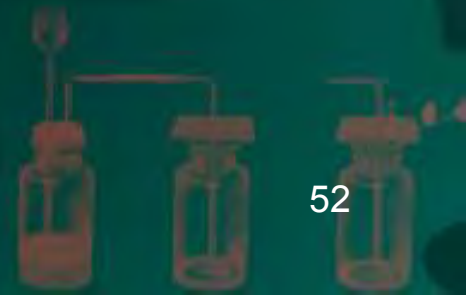
Extra oral examination

- facial asymmetry with diffuse swelling over the chin region
- Swelling was found to be approximately 2 cm × 2 cm in size
- skin was normal in color and texture with no evidence of sinus/fistula



Intra oral examination

- adequate mouth opening with intact deciduous dentition
- Swelling was extended from right deciduous molar to left canine
- Mucosa overlying was normal in color
- Swelling was non-tender, non-pulsatile, bony hard, non-fluctuant, non-compressible on palpation
- Expansion of both, buccal as well as lingual cortical plates
- aspiration from the swelling yielded cystic color fluid



Panoramic radiographic

- unilocular well-defined radiolucent lesion extending from lower deciduous first mandibular molar to right lower canine with evidence of roots resorption

Treatment

- made the provisional diagnosis of UA
- Enucleation of the cyst with extraction of the involved teeth followed by application of Carnoy's solution for 3 min over the cavity was planned under general anesthesia (GA)
- Patient has been on regular follow-up since 2 years, patient is doing well with no signs of recurrence

Discussion

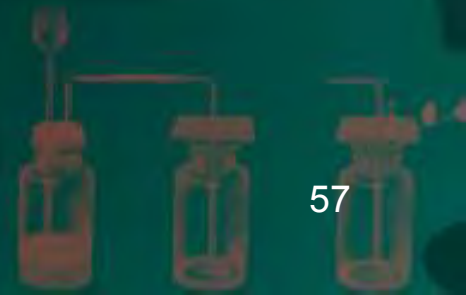
- UA is considered a variant of the solid or multicystic ameloblastoma, accounting for 6% to 15% of all intra osseous ameloblastomas
- difficult to distinguish dentigerous cysts from UA clinically
- Presence of lingual cortical plate expansion, cystic fluid on aspiration and presence of root resorption of teeth in panoramic radiograph helped us in making the preoperative diagnosis of UA over the dentigerous cyst without incisional biopsy

Discussion

- Enucleation alone yielded the highest recurrence rate among all treatments
- Marsupialization together with other treatments resulted in an 18% of recurrence rate
- Enucleation with application of Carnoy's solution and the extraction of closely related adjacent teeth has resulted in a recurrence rate of 16%

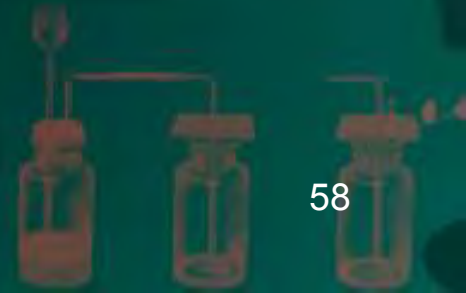
Discussion

- The recurrence rate could even lower than reported, if the closely related teeth with tumor are extracted
- To preserve the tooth without damage, tumor remnants may be left around the tooth apex or root and these may lead to recurrence



Carnoy's solution

- is a fixative composed of 60% ethanol, 30% chloroform and 10% glacial acetic acid
- The success of the application of Carnoy's solution after enucleation was thought to be due to both its penetration and fixation action
- apply the solution with cotton applicators or ribbon gauze for 3-5 min, rinse the bony cavity



醫學倫理討論

醫學倫理

- 生命的神聖性(Sanctity of life)
- 六大原則



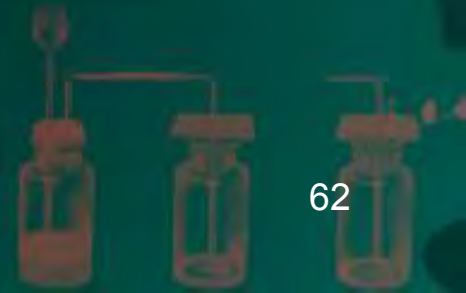
Tom Beauchamp & James Childress

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 的必要性?



誠信原則

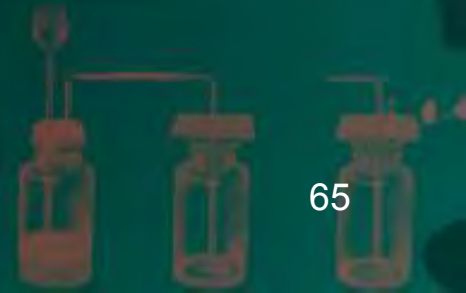
- 對於患者的疾病**嚴重程度**是否有確實地通知，盡到告知的義務？
- 是否有清楚的向病人說明清楚疾病病程、治療計畫、預後、風險？
→皆以已告知病人後，經同意才進行手術。

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？
 - unicystic ameloblastoma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。

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!

