原文題目(出處)：	An incidentally discovered radiolucency in the posterior mandible. Oral Surg Oral Med Oral Pathol Oral Radiol 2012;113;17-20.
原文作者姓名：	Hutton SB, Kalamchi S, Wright JM
通訊作者學校：	Department of Oral and Maxillofacial Surgery, Arizona School of Dentistry and Oral Health, Mesa, Arizona
報告者姓名(組別)：	劉裕誠 (Intern K組)
報告日期：	101 .07.10

內文：

Clinical Presentation

Personal data

(1) Gender：female

(2) Age：61 y/o

Chief complaint

→ a radiolucent lesion is found during routine oral examination over left retromolar region

Past medical history

(1) type II DM (managed with metformin)
(2) alcohol (-)
(3) tobacco (-)
(4) drug use (-)
(5) No remarkable family history for neoplastic disease

Past dental history

(1) Restoration over several decades
(2) Extraction of 38 without periapical pathology at 19 y/o

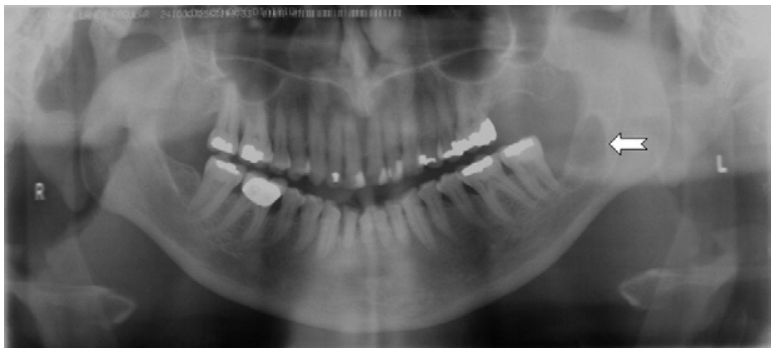
Clinical examination

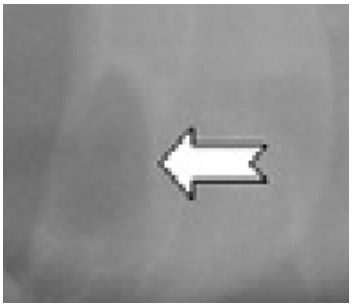
(1) Normocephalic atraumatic head with normal range of mandibular movement
(2) Occlusion：stable
(3) No lymphadenopathy is noted over cervical region
(4) No soft tissue pathology is noted over intraoral area

Radiography examination

(1) Panoramic finding

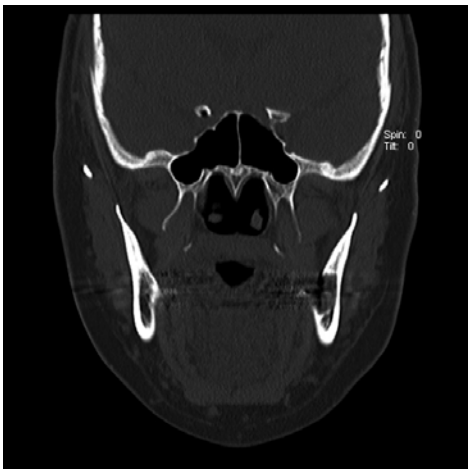
A well circumscribed noncorticated radiolucent lesion distal to 37, within the ramus of left mandible about 1.5 x 2.0 cm in diameter





(2) CT finding

a osteolytic lesion centered within left ramus , penetrating the lingual plate



Differential Diagnosis

A significant number of intrabony jaw lesion have their origin from tooth-forming tissue → odontogenic cysts and odontogenic tumors are logical start for differential diagnosis

Odontogenic Cysts

→ Keratocystic odontogenic tumor

1. affect mandible (75%)
2. strong propensity for posterior region
3. between 10~40 y/o
4. well corticated borders, sometimes(38%) associated with an unerupted tooth or earlier extraction site

→ Residual cysts wound not be considered because of the conditions

Odontogenic Tumors

Well-circumscribed → a benign tumor or a low-grade malignancy

→ Odontogenic myxoma

1. equal predilection for maxilla and mandible (23% in posterior mand.)
2. a “soap-bubble” appearance spanning from the premolar region to the molars --- typical feature of myxoma

→ Ameloblastoma

1. common in mandible(80%)
2. affect molar-ramus area(39%~66%)
3. average age：middle to 30s , just 10% in 70s
4. large R/L lesion with bone expansion and “honeycombed” appearance
5. sometimes contains an unerupted tooth (usually third molars)

Nonodontogenic neoplasm

→ Desmoplastic fibroma

1. 84% found in mandible and 70% lesions in mandible affect ascending ramus
2. 84% occur in people younger than 30 y/o

→ Neurofibroma

1. common on buccal mucosa and dorsum of tongue , sometimes in bone

Malignancy

→ Metastatic disease

1. usually symptomatic
2. not uncommonly an oral metastasis can precede the discovery of the primary

site

→ Clear cell odontogenic carcinoma

1. uncommon
2. 80% in mandible
3. usually found in people elder than 50 y/o
4. cortical bone perforation, soft tissue involvement are noted

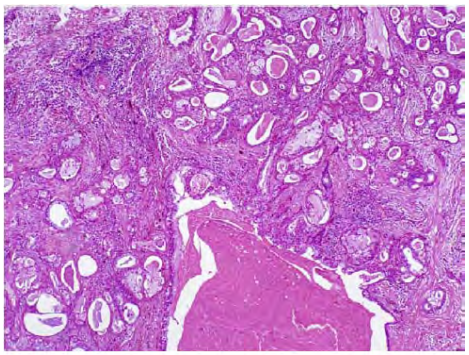


Fig. 3. Photomicrograph showing small infiltrating cords and islands of neoplastic epithelium with micro- and macrocystic areas. Hematoxylin and eosin stain. Original magnification ×13.

→ Primary mucoepidermoid carcinoma

1. may associate with ectopic salivary gland, odontogenic epithelium(mucus-producing cells)
2. rarely occur
3. middle-age adults and slightly female predilection
4. common in mandible (often in molar-ramus area)
5. cortical swelling, sometimes bone destruction is noted

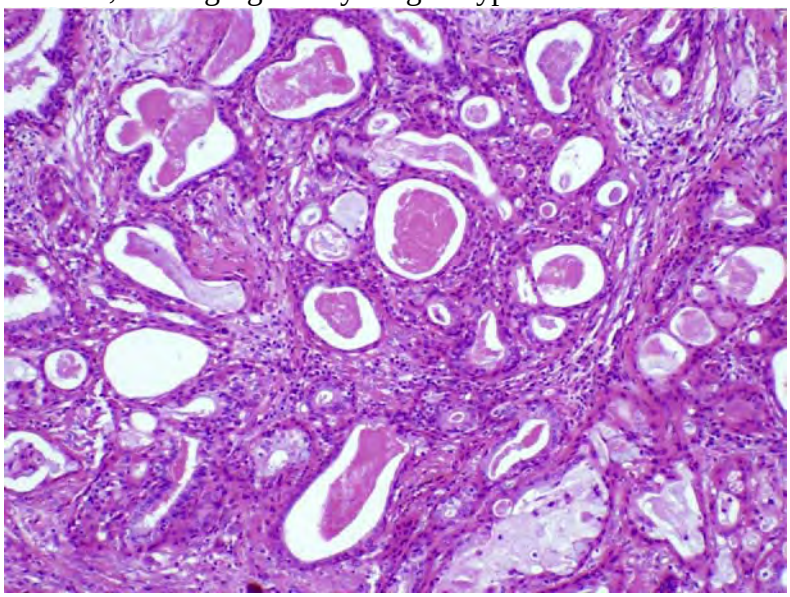
Diagnosis

(Incisional biopsy is operated)

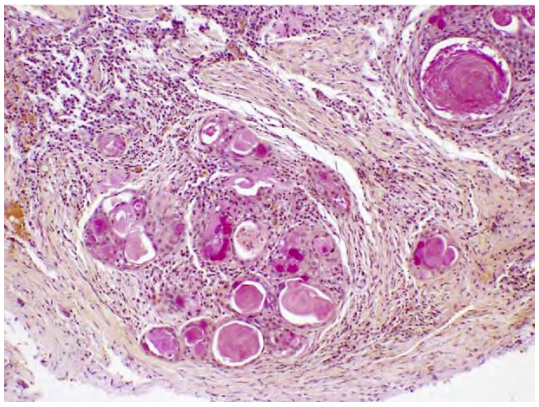
Histologic examination

(1) numerous nets and large sheets of epithelial cells with both microcystic and marcrocystic area

well-formed mucus cells were mixed with the epidermoid cells and mature squamous differentitation was noted. Mitises were rarely encountered and perineural invasion, necrosis, and high-grade cytologic atypia were absent



(2) mucicarmine special stain demonstrated intracytoplasmic staining of mucous cells



Positron-Emission tomography finding
(1) no indication of metastatic disease throughout the body
(2) no suggestion of another primary neoplasm
Final diagnosis → intraosseous mucoepidermoid carcinoma

Management

Surgical treatment
→ resected with 1-cm safety margin
→ buccal resection：subperiosteal with cortical plate intact
→ lingual resection：supraperiosteal, including lingual mucosa and sacrificing lingual nerve
→ coronoid process and condylar process remain intact
Post-OP therapy
→ IMF for second-stage surgery and for accurate reconstruction of the mandibular continuity
→ harvesting a bicortical bone graft from iliac crest
→ reconstruction of the ascending ramus with a 2.3 mm Stryker Leibinger fixation plate
12-month follow up
→ radiograghy shows osteogenesis over the donor tissue and the recipient site
→ Occlusion：stable
→ MMO：37 mm

Discussion

Primary intraosseous adenocarcinoma is rare, but when it occurs, most often be confined in jaw, particularly the mandible(ramus and body).

The 3 most common subtype of intraosseous adenocarcinoma
(1) MEC (most prevalent)
(2) Adenoid cystic carcinoma
(3) Adenocarcinoma not otherwise specified
→ fewer than 200 cases have been reported in literature, the majority of Which(n=135) are intraosseous MEC

The origin of central salivary gland tumors
(1) developmental remnants of submandibular salivary gland
(2) ectopic entrapment of retromolar minor mucous glands
(3) grandular metaplasia of epithelial rest of dental lamina
(4) expression of grandular potential of the epithelial lining of odontogenic cyst

→ in this case, due to the lack of details, it's hard to rule out the origin
→ if it's odonogenic origin, 32%~48% of central MEC are associated with an Impacted tooth or an odontogenic cyst

Genetic analysis

→ soft tissue and MEC with the chromosomal translocation
→ CRTC1/MAML2, increasing likelihood of metastasis

Clinical and Radiography features of central MEC

(1) no sexual predilection
(2) from first to seventh decade of life(predilection of middle age)
(3) affect 3 times in mandible than in maxilla
(4) posterior mandible, rarely in anterior jaws
(5) usually asymptomatic, but if the neoplasm expanding, pain and swelling may occur.
(6) Unilocular or mutilocular RL, well or ill-defined (often well-defined)
(7) The margins are noncorticated, but typically the cortical plate is intact

Diagnosis

→ cortical plates are usually intact
→ A clinical 3-stage classification for classifying central MECs
→ cortical perforation and destruction of bone → stage III

Treatment

(1) Aggressive surgical resection
→ En bloc resection
(2) Conservative approach
→ enucleation, curettage, marsupialization combined with RT

Prognosis

→ En bloc resection：recurrence less than 4%
→ Conservative approach：recurrence 40%
→ Survival rate of 2- and 5-year f/u after aggressive treatment = 100%
→ Metastasis from maxilla = 0 / from mandible = 39% to cervical region before Treatment (cytogenetic analysis of soft tissue shows high correlation with CRTC1/MAML2 fusion and metastasis

Summary

(1) The intraosseous MEC in this case is an asymptomatic, well-circumscribed, noncorticated radiolucency of the retromolar region of left mandible
(2) Differential diagnosis of the lesion contain primary odontogenic cysts and tumors, and nonodontogenic tumors or metastasis
(3) The histogenesis of intraosseous MECs is still debated
(4) Surgical treatment of this case is associated with good prognosis

題號	題目
1	Case中採用En bloc resection切除左側lingual nerve後，對於patient術後哪項是可預期的狀況 (A) P't 左側舌頭從此活動不便，失去部分口腔自淨能力 (B) P't左側舌頭從此對於酸甜鹹的味覺不靈敏 (C) P't左側舌頭從此失去痛覺，可能有ulcer而不自知 (D) 無關緊要，因舌頭是由Glossopharyngeal nerve支配
答案(C)	出處：Contemporary Oral and Maxillofacial Surgery,5th ed.
題號	題目

2	有關MEC治療的預後敘述，以下何者錯誤 (A) 若顯微鏡下發現cyst formation越少，而degree of cytologic atypia越高，則預後越差 (B) 整體而言，intraosseous MEC的預後佳，P't死亡常因MEC metastasis而非recurrence (C) Solid island of squamous cell and intermediate cells為high-grade MEC的特徵 (D) 治療方式的選擇隨MEC的惡性程度高低而有所不同，所以術後combine RT為非必需的
答案(B)	出處：Oral and Maxillofacial Pathology