原文題目(出處)：	Case Report Palatal Swelling: A Diagnostic Enigma
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內文：

1. Introduction

a. no longer termed as "Benign", because of their unpredictable nature and their distant lung metastases

b. mononuclear cells proliferation intermixed with multinucleated osteoclast - t-like giant cells

2. Case Report

a. data:

i. 30-year-old female

ii. Chief complaint:

A swelling over the left side of the palate for 6 weeks

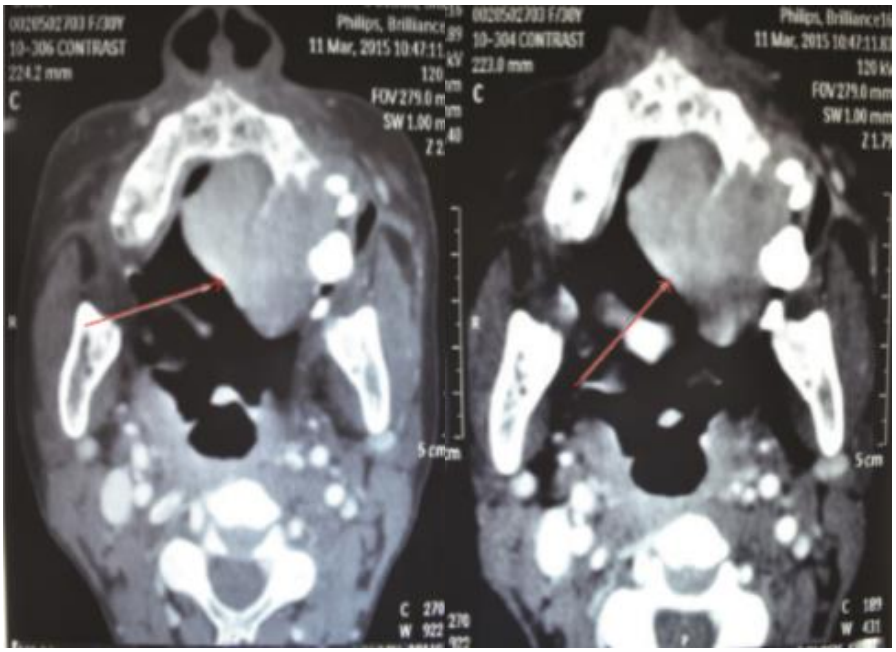
iii. Size and site

extraoral	extending 1cm from ala of the nose on the left side anteriorly up to 3cm from the tragus of the left ear posteriorly	

intraoral	A massive, solitary proliferative growth measuring 2.5cm × 3cm with irregular margins, extending from the left maxillary canine region up to the posterior part of the hard palate The lesion was crossing the midline at the mid-palatal region	

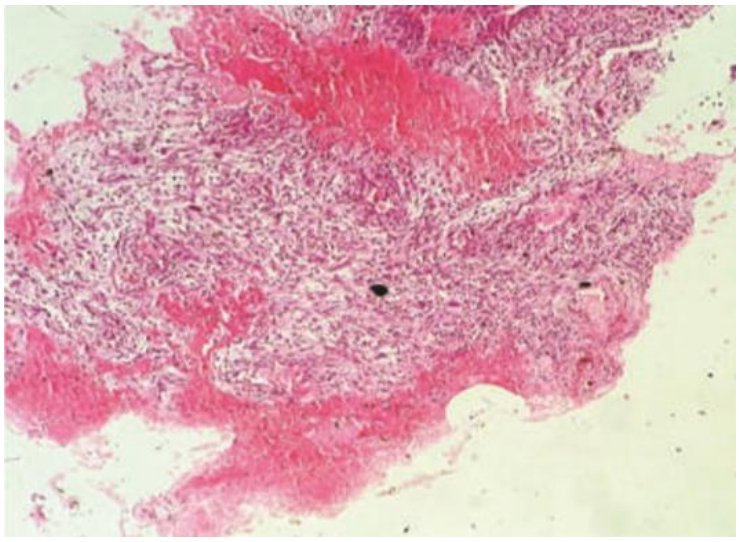
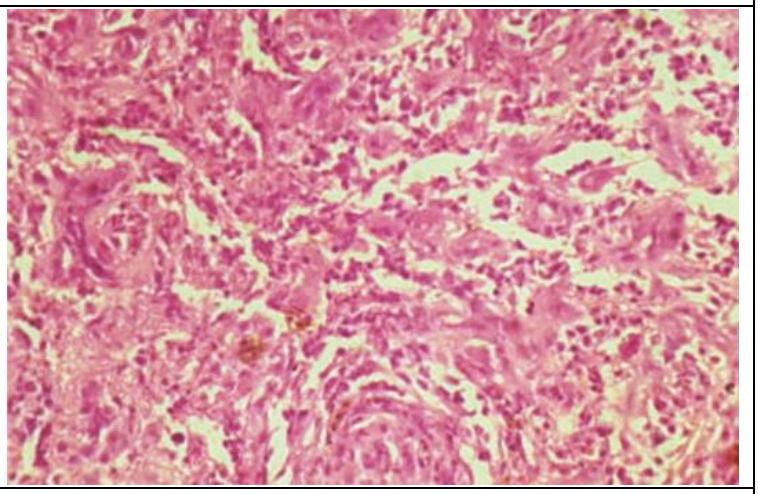
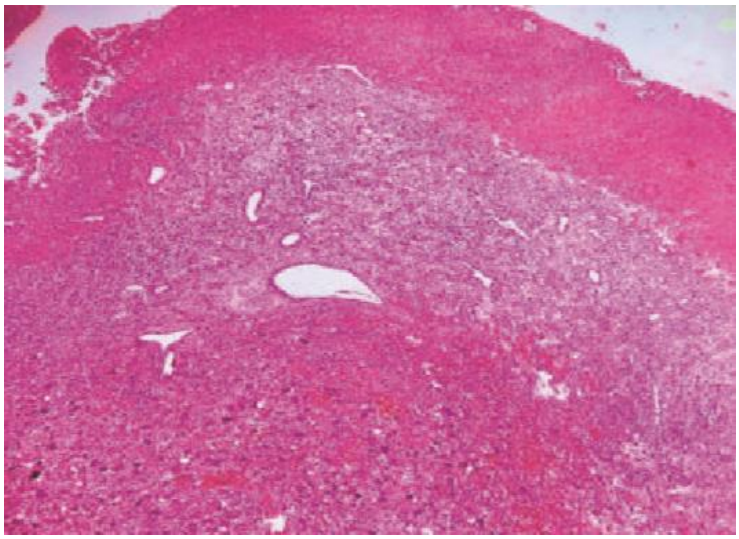
iv. Color: erythematous

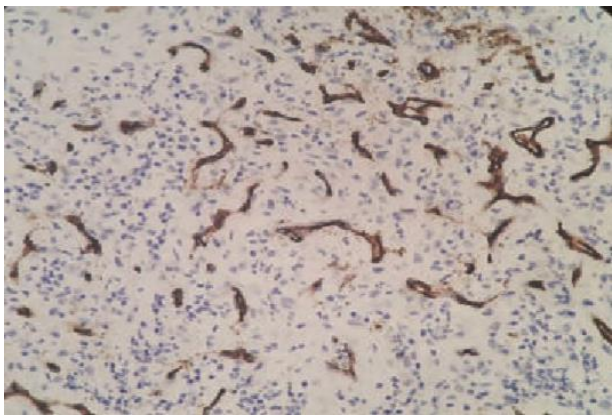
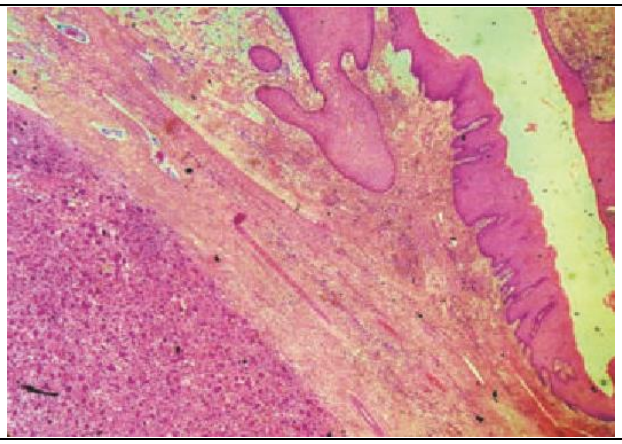
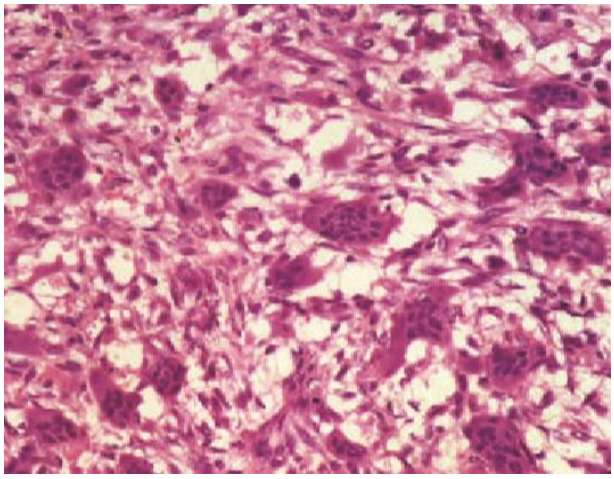
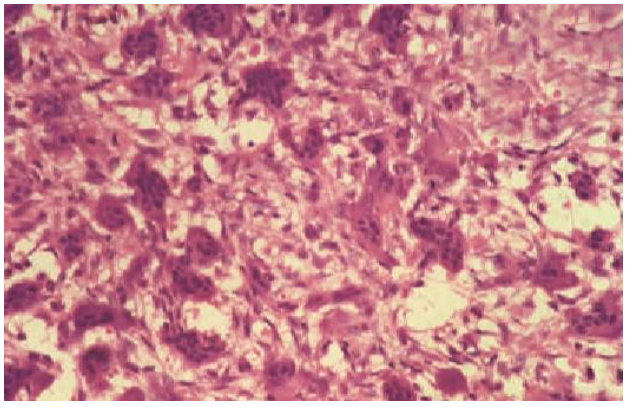
v. CT: Heterogenous, well-defined, intensely enhancing lesion measuring 3 × 4.1 × 4.3cm(cc × ap × trans)seen involving left side of buccal mucosa and the hard palate with displacement of lingual septum to right.



vi. The level of serum alkaline phosphate was highly increased (320 U/L) (normal level: 45－129U/L)

vii.

H&E 10x view showing vascular stroma with proliferation of spindle cells intermixed with extravasated RBCs	
H&E 40x view showing anastomosing vascular channels lined by atypical endothelial cells	
H&E 10x view vascular stroma with multinucleated giant cells.	

Immunohistochemical staining: showing positivity for endothelial cells to CD34 and negativity for tumor cells	
H&E 10x view overlying epithelium, connective tissue capsule, neoplastic areas showing proliferation of stromal cells, and multinucleated giant cells	
H&E 40x view showing multinucleated giant cells with agglomerate 凝聚 of nuclei in the center with a clear cytoplasmic halo	
H&E 40x view showing cellular pleomorphism and mitotic activity 有絲分裂 ***which indicates local aggressiveness of this lesion	

b. Diagnosis: giant cell tumor
Characteristic findings:
proliferating stromal cells presence of multinucleated giant cells, occurrence of cellular atypia and mitotic activity

c. There was no evidence of recurrence in 11 months of follow-up

3. Discussion

Giant cell tumor:

a. **Occurance rate**: 1/1000000 per year
Occasionally undergo malignant transformation
Metastasis range 1 to 6% .Lung is the main site
Mean interval is 4~5 years

b. **Site**: head and neck region, proximal tibia ,distal femur ,proximal humerus ,and distal radius

c. **Peak incidence**: 20 to 45 y/o

d. **Enneking classification**:
Stages I,II,III and Malignant

e. **Characteristically seen** in giant cell tumor :

hemorrhage
mononuclear (macrophage/monocyte)
multi nucleated giant cells
stromal cells

f. **Symptoms sign**:
Generalized:
i. localized severe intractable epistaxis 鼻塞
ii. visual defects 視力受損
iii. hearing loss 聽力喪失
iv. tinnitus 耳鳴
v. reduced joint mobility 關節活動能力受限
vi. difficulty in swelling 吞嚥困難
In our case:
i. pain
ii. swelling
iii. oozing of blood
iv. difficulty in swallowing

g. **Radiological findings**:
Generalized:
i. well-circumscribed lytic lesion

ii. enclosed by minimal or no sclerosis
iii. may break through the cortex
iv. may invade the adjacent soft tissues

A CT scan of lesion shows

v. soft tissue mass
vi. bony destruction
vii. perforation of cortex
viii. extension toward adjacent anatomic structures,
ix. resorption of teeth
x. perforation of bundle bone

In our case:

revealed similar findings

h. Appearance:

Generalized

i. soft
ii. purple-red to brown
iii. meaty
iv. uniform or variegated 不均質 in aspect
v. with small,pongy yellow foci

In our case

i. blackish,brown
ii. soft to firm

i. chemical methods

high levels of alkaline phosphate

j. Comparism:

Central giant cell granuloma :

proliferative destructive lesion
young females
collagen fibers
hemosiderin
multinucleated giant cells
maxilla followed by mandible

CENTRAL GIANT CELL GRANULOMA OR LESION

The central giant cell granuloma of the jaws has often been compared with the giant cell tumor of long bones. It has been proposed that these two entities represent a continuum of a single disease process that is modified by the age of the patient, the site of occurrence, and other factors.[71-72] This would give credence to the theory that the aggressive examples of giant cell granulomas of the jaws may be appropriately designated as *nonmalignant giant cell tumors.*[73] The cause is unknown.

In severe cases of hyperparathyroidism, the cortical plates are especially thinned, and the lamina dura around the roots of the teeth may not be apparent on radiographs. Central giant cell lesions (brown tumors) are prone to occur and are found frequently in the jaws (see Fig. 19-16). They mimic the central giant cell granuloma in clinical, radiographic, and histologic features. The giant cell lesion of hyperparathyroidism may demonstrate a high recurrence rate if the systemic problem is not controlled.

Brown tumors:
bone cysts,
bone resorption
generalized osteopenia
ribs, clavicle, pelvic girdle, and mandible
osteoclast-like multinucleated giant cells interspersed with infiltration of hemorrhage and deposits of hemosiderin.

Aneurysmal bone cysts:
Vertebral column and mandible
blood filled spaces
separated by fibrous septa
multinucleated giant cells
osteoid
hemosiderin and bone formation.
soft tissue invasion, expansive and rapid growing destructive lesion causing cortical perforation
In our case absence of blood filled spaces and hemosiderin pigments were seen

Table 1: Literature review of previously reported cases of oral cavity with treatment aspects.

S. number	Authors	Year	Gender/age	Site	Follow-up	Recurrence	Treatment
1	Koszel et al. [2]	2011	17 M	Maxillary alveolar process	2 years	No recurrence	Surgical removal
2	Pradhan et al. [3]	2003	19/F	Jaw bones, orbit	Every 6 months	No recurrence	Subciliary, transperiosteal anterior orbitotomy
3	Giri et al. [4]	2015	12/F	Mandible	3 years	No recurrence	Surgical resection
4	Anand et al. [5]	2001	20/M	Hard palate	Eight months	No recurrence	Surgical excision
5	Mishra and Shukia [6]	1999	6/M	Upper alveolus, cheek	3 years	No recurrence	Surgical removal
6	Saha et al. [7]	2012	45/M	Maxilla	—	No recurrence	Partial anterolateral maxillectomy

k. **Treatment**
   a. intralesional curettage with autograft reconstruction and wide surgical resection and placement of cement, polymethyl methacrylate

b. Alcohol, hydrogen peroxide, zinc chloride, and phenol are usually applied to the lesional site. Application of hydrogen peroxide raises the infiltration of phenol 苯酚 into adjacent tissues to achieve embolisation reduction in morbidity rate 發病率, preserve function, and relieve pain .

4. Conclusion

To attain a proper diagnosis, careful histopathological assessment is mandatory.

Our case describes the difficulty in diagnosing giant cell tumors from various other lesions with which they contribute to similar behaviour, histopathology, and prognosis.

題號	題目
1	Which below is a histological finding of giant cell tumor. (A) proliferating stromal cells (B) multinucleated giant cells (C) mononuclear (D) All of above
答案 (D)	出處：本篇文章
題號	題目
2	Metastasis of giant cell tumor is uncommon , if occurs, the main site is ?
	(A) Pelvic (B) Lung (C) Colum (D) Breast
答案 (B)	出處：本篇文章