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內文：

I. Introduction

一、Peripheral ossifying fibroma (POF)

1. Classification: believed to be a **reactive** rather than neoplastic pathologic process
2. Base: **pedunculated** or sessile nodule
3. Site: exclusively on the **gingiva** (believed to arise from the periodontal ligament)
4. Size: **typically self-limiting and < 2 cm**, however it has been recognized that some examples may grow quite large and **may displace teeth**.
5. The mass-like clinical presentation and radiographic appearance of soft tissue
6. densities may lead to misinterpretation of lesions larger than 2 cm, however **the histologic appearance is diagnostic**.

二、Giant POFs (GPOF)

1. Several names (large, atypical, huge, gigantiform)
2. Primarily been explored through case reports

三、資訊不足的 case reports 沒有被納入此篇 review

四、此篇 review 發表一個新的 GPOF 的 case，並蒐集過去發生的 10 個 case，針對臨床、影像和結果做整理，探討其可供鑑別的特徵，以利做出正確的診斷。

II. Report of Case

一、54y/o African American male went to emergency dental clinic

C.C.: "my gums are really, really bad; protruding and pushing my teeth out of the way."

P.I.: Pain: (-). A small lesion on his gums about 6 yrs. ago, which continued to grow and caused some discomfort for about the first 3 yrs. The lesion was expansile and displaced the adjacent teeth.

二、Medical history:

1. 近期無就醫和用藥紀錄。偶爾吸大麻。drank beer socially.
2. 兩年前體重下降曾就醫，無任何 findings。BP: 114/75mmHg, pulse: 97 bpm

三、Extra-oral examination was unremarkable.

四、Intraoral examination:

1. An asymptomatic, pedunculated, mass measuring 4.5 x 3 x 3 cm in size, covered by normal mucosa, non ulcerated, with focal areas of acute inflammation where associated teeth exhibited periodontal disease.
2. The mass was mobile, firm to palpation and extended from the alveolar mucosa, spanning teeth 33~43.
3. Generalized advanced periodontitis, multiple caries and poor oral hygiene. Normal overlying mucosa.

五、Occlusal radiograph:

1. A poorly defined, facially expansile lesion with the appearance



of soft tissue opacification in the anterior right mandible and displacement of the mandibular incisor teeth.

2. No root resorption

六、 The excisional biopsy was submitted for histopathologic examination. The lesion was diagnosed as POF.

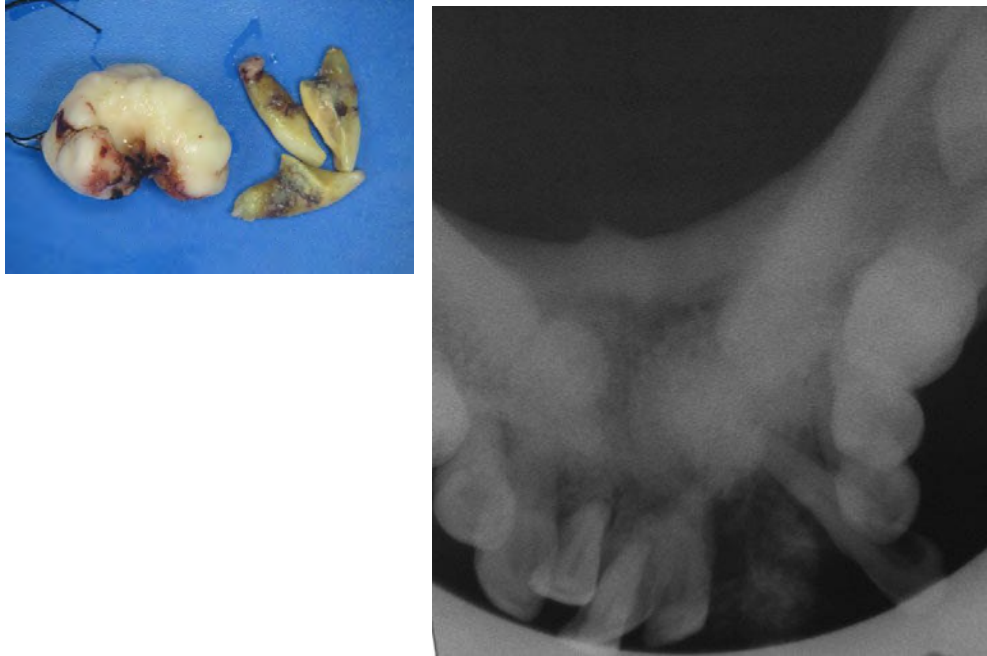


Fig. 2 A poorly defined, facially expansile lesion with the appearance of central radiating opaque spicules and displacement of involved teeth

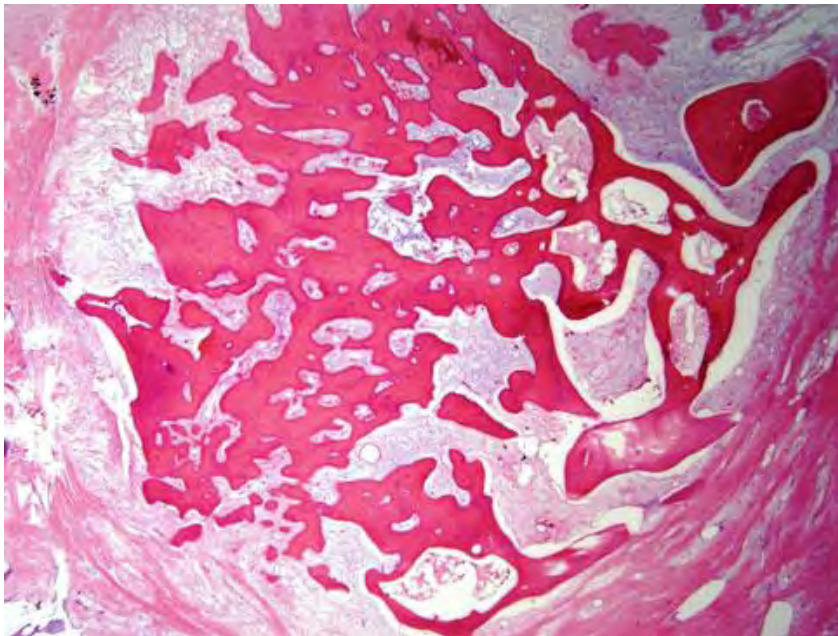
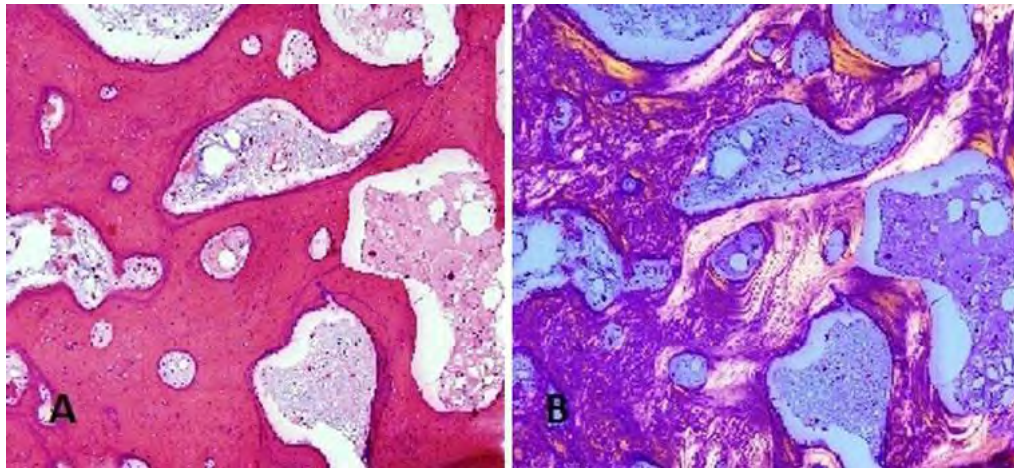


Fig. 4 An area of calcification surrounded by fibrous stroma seen throughout the lesion, typical of peripheral ossifying fibroma. (x 20 magnification)

七、 The calcified material was viewed under polarized light and demonstrated an admixture of lamellar and woven bone, approximately 60 % woven and 40 % lamellar (Fig. 5).



八、 The patient was followed for 7 months and demonstrated excellent healing without evidence of recurrence (Fig. 6).



Table 1 Clinical, radiographic and histological features of giant peripheral ossifying fibroma

	Boher and Dizon	Poon et al.	Kendrick and Nguyen	Moon et al.	Therbach et al.	Kim and Kim	Promacha	Chandhari and Usagi	Tsai	Sacks et al.	Childers et al.
Terminology	Large	Giant	Large	Large	Atypical	Huge	Large	Large	Large	Gigantiform	Giant
Clinical diameter (cm)	6	9	2.7	3.5	3	8	2.5	5.9	6	10.5	4.5
Base	Pedunculated	Gingival	Pedunculated	Pedunculated	Pedunculated	Pedunculated	Pedunculated	Pedunculated	Well demarcated	Pedunculated	Pedunculated
Tooth displacement	Yes	Yes	No	Unk	No	Edematous	Yes	Unk	Yes	Edematous	Yes
Root resorption	No	No	No	Unk	No	N/A	No	Unk	No	NA	No
Duration	Long	5 years	Unk	5 month	Long	5 years	1 month	6 month	3 months	Unk	6 years
Patient age (years)	70	32	7.6	12	23	66	12	55	10	52	54
Dental condition/ hygiene	Poor	Unk	Good	Unk	Unk	Edematous	Unk	Poor	Unk	Edematous	Poor
Location	Mandible	Maxilla posterior and pharynx	Mandible posterior	Maxillary anterior	Mandibular posterior	Mandibular posterior	Maxillary posterior	Mandibular posterior	Maxillary posterior	Mandible posterior	Mandible anterior
Follow up	Unk	NED 33 months	NED 6 months	NED 20 months	Unk	NED 120 months	Unk	Unk	Recurrence 2 months	NED 6 months	NED 7 months
Comment	Facial asymmetry	Facial asymmetry						Displaced zygomatic muscle and artery	Facial asymmetry with distorted lateral ala of nose	Facial asymmetry with distorted lateral commissure	Facial asymmetry
Histologic											
Classification	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stroma	Fibrocellular	Fibromyxoid	Fibrovascular	Fibroblastic	Fibrous	Fibrous	Fibroblastic	Fibroblastic	Fibrous	Fibromyxoid	Fibrous
Odontogenic epithelium	No	No	No	No	No	No	No	No	No	No	No
Radiographic											
Calcification visible	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes
Facial bone resorption	No	Yes	Yes	No	No	Yes	No	No	No	Yes	No

Unk: unknown, NED: no evidence of disease

III. Discussion

請看 P359 table 1 Clinical, radiographic and histological features of giant peripheral ossifying fibroma

一、 These **clinical** findings differ from conventional POF.

二、 缺乏使用標準命名”giant”做診斷

1. Conventional POF 的最大直徑 < 2 cm。雖然有些 case 提到”large size”，但缺乏詳細的臨床描述，所以並沒有納入此篇 review。

2. 缺乏標準的命名法，阻礙了搜尋 GPOF 的 case。 ”Giant” is already a controlled vocabulary (MeSH) term.

三、 The **radiographic** images in some cases caused consideration of malignant neoplasms.

1. **In our case**, the radiating appearance of the opacity was reminiscent of the **soft tissue ossification sometimes seen in osteosarcoma**. This finding is **not** typical for POF.

2. 針對此項特點做進一步調查，可能會是 GPOF 的影像特徵。

四、 The **histopathology**: ossified material in a fibrous to fibromyxoid stroma. No odontogenic epithelium was noted. (Consistent with conventional POF)

五、 Differential **diagnosis** consideration of both benign and malignant differentials.

1. 似良性：**clinical presentation of a pedunculated, mobile mass**

2. 似惡性：**radiographic features with spicules of radiating opacification into less dense areas** representing soft tissue, **aggressive process** (the size of the mass,

focal bone resorption, and the displacement of teeth)

六、需要更多 GPOF 的研究來釐清復發率、病理變化、以及更明確的特徵鑑別 GPOF 和 POF。

IV. Conclusion

- 一、GPOF is a **rare** subset of POF with distinctive clinical and radiographic features.
- 二、Diagnosis is based on the conventional clinical and histologic features of POF in conjunction with size over **2.5 cm**.
- 三、Limited follow up suggests excellent prognosis when **managed by complete surgical excision**.

題號	題目
1	下列何者非 cementoossifying fibroma 的臨床特徵？ (A) 發生在任何年齡層，特別是年輕成人 (B) 通常無症狀 (C) 完全不會造成臉部的不對稱 (D) 會推擠移動牙齒
答案(C)	出處： Oral radiology-principles and interpretation, P457
題號	題目
2	下列對 cementoossifying fibroma 的描述何者為錯？ (A) 最常發生在下顎骨後牙區 (B) 成熟期在影像是為放射線透過性 (C) 發生在上顎可能會完全佔據上顎竇 (D) 組織學上可看到有纖維間質環繞著鈣化組織
答案(B)	出處： Oral radiology-principles and interpretation, P456~458