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Abstract

Ostemoa cutis

1. A rare benign disorder where osseous nodules form in the reticular layer of normal skin
2. These nodules are formed by the deposition of lamellar bone and are characterized by osteocytes in the core and osteoclasts around the periphery
3. Osteoma cutis cases has always been challenging especially using conventional two-dimensional (2D) radiographs, owing to difficulty in localization.

4. Cone beam CT (CBCT), with its three-dimensional (3D) capabilities, offers a great tool to help detect and diagnose these calcific entities

5. We report a case of miliary type OC incidentally detected in the maxillofacial region using CBCT imaging.

Introduction

Osteoma cutis

1. Age predilection: 10~20 y/o
2. Sex predilection: Female
3. Classification
   -Primary Osteoma cutis
   -Secondary Osteoma cutis: increase blood calcium levels

Cone beam computed tomography(CBCT)

1. Is a (3D) imaging modality that is widely used by dentists for a variety of indications.

2. Advantage

   -Elimination of superimpostions

   -Lower radiation dose to patient

   - The radiation dose from specific CBCT examinations can be as low as one-sixth of that of conventional multidetector CT

3. Safi et al：Osteoma cutis as an incidental finding detected on CBCT to be 2.27%

4.Four distinct categories:

   -Fingle nodular

   -Plate-like

   -Transepidermal

   -Multiple miliary.

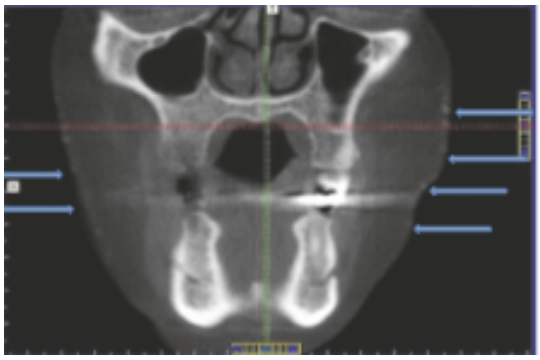
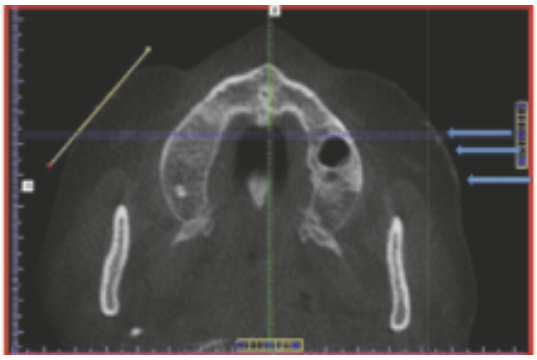
Case Presentation

Case 一

PI：A 45-year-old female presented to a university-based oral and maxillofacial surgery clinic complaining from pain in her jaws associated with failing fixed partial dentures and requested dental implants

1. Medical history
   A. Anemia
   B. Crohn's disease
   C. severe acne(**痤瘡**)as a teenager.俗稱的青春痘

2.Outward appearance
   A. Multiple asymptomatic papules were noted on her cheeks
   B. The papules had hard consistency
   C. The overlying skin appeared pitted
3.Treatment plan: CBCT(i-CAT) imaging of the jaws for implant treatment

4.CBCT shows:

A. Multiple small round nodules of homogenous high density
B. They appeared within the thin layer of skin of the face
C. These imaging features are most consistent with miliary type OC, which presents as numerous lesions especially on the face of female patients.

Discussion

1. OC is a benign condition in which soft tissue ossifications occur in the dermis layer of skin.

2. Classification

-POC:

a) It is not associated with any history of trauma or cutaneous disease accounts for 15% of OC cases
b) Subdivided into two types
c) unclear and confusing

-SOC: inflammation, trauma, neoplastic changes(腫瘤變化), venous stasis(靜脈鬱血)

3. Etiology and pathogenesis：unknown and debatable

4. Bouraoui et al., in a similar case report, suggested that acne may have resulted in scarring which in turn triggered osteoblastic metaplasia
5. Thielen et al. found an association between OC and chronic acne

6. Approximately 85% of OC cases are believed to develop as a consequence of prolonged acne. (OC常常發生在acne出現的位置)
7. OC can also occur in the breasts, extremities, and buttocks
8. OC is seen intraorally in the tongue：Osteoma mucosae or Osseous choristoma （less frequently)
9. Clinical OC presents
    A. Asymptomatic single or multiple papules, nodules, or plaques or as miliary lesions
    B. Bony hard
    C. Skin color：yellowish white
10. Image show
    A. small smoothly outlined radiopaque with a radiolucent center, with a density that is similar to bone
    B. Shape: washer-shaped or donut or snowflake-like
    C. Size: 0.1 cm to 5.0 cm
    D. These imaging features may mimic other calcific conditions in the facial soft tissues.
    E. Surgical clips, wires, or sutures placed for procedures such as face-lifts may result in calcified nodules
    F. Correct diagnosis：imaging findings搭配history taking and examination
11. .Treatment plan:
    A. OC ：focus on treating the underlying systemic condition if one exists.
    B. Cutaneous nodules: no treatment to surgical excision
    C. Prognosis:without recurrence
    D. Other option: topical tretinoin、YAG laser、CO2 laser
12. CBCT給牙科帶來很大的改變，很多病灶能通過3D攝影能看到

更清楚的影像，給我們更精確的diagnosis

題號	題目
1	What is not the disavantage of Conventional Computed Tomography? (A) The technique is time-consuming (B) The radiation dose to patient may be high (C) The radiation dose to patient may be low (D) Required high level cooperation
答案 (C)	出處： Essentials of Dental Radioqraphy and Radiology,3rd edition p.157
題號	題目
2	下列有關 Conventional CT 與 Cone Beam CT 的比較與敘述」何者錯誤？
	(A) 前者比後者所暴露的輻射量高於後者 (B) 前者比後者需要更多的工作時間 (C) 前者使用的 X 光射束為錐狀 (D) 前者使用的 X 光射束為直線
答案 (C)	出處： Essentials of Dental Radioqraphy and Radiology,3rd edition p.157 197 199