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內文：

### Introduction

Non-Hodgkin's lymphoma (NHL)

- 頭頸部惡性腫瘤排名：It is the third most common malignancy to affect the head and neck region, after squamous cell carcinoma and salivary gland tumors (Barker 1984).
- 細胞來源：NHL can be classified according to the cell of origin into T-cell or B-cell lymphoma; the latter being more common in the oral cavity (Neville et al. 2009).
- 好發年齡：The incidence of NHL is rare in patients under the age of 40, with approximately 70% of all cases being diagnosed in people over 60 years.
- 好發位置：It predominately occurs in lymph nodes but 20–40% arise in extra-nodal sites (Neville et al. 2009).
- Extra-nodal lymphoma好發位置：The gut is the commonest site for extra-nodal lymphoma, but bone and the mouth are other frequently affected sites.
- NHL於口腔內的表徵：Non-Hodgkin's lymphoma can present in a number of different forms within the oral cavity, the more frequent being palatal (Tomich and Shafer 1975) and gingival swellings (Spatafore et al. 1989, Payne and al-Damouk 1993). It is reported that 36–45% of oral NHL can affect the jaw bones (Keyes et al. 1988).
- DD：The initial diagnosis of oral lymphomas can be challenging as they may resemble pyogenic granulomas, ulcers, sinusitis (Spatafore et al. 1989), a non-healing socket (Thomas et al. 1991) or mimic an acute dental abscess (Spatafore et al. 1989, Rog 1991, Payne & al-Damouk 1993).
- Patients may complain of non-specific pain, which may be misdiagnosed as periapical inflammatory disease.

### Case report

General Data：

A 38 year-old Afro-Caribbean female

Chief complaint：

Spontaneous intermittent dull ache in the upper left canine region

Present illness：

This 38 year-old Afro-Caribbean female referred herself to the Birmingham Dental Hospital, UK primary care unit in November 1998. She described a 6-month history of a spontaneous intermittent dull ache in the upper left canine region. There was no disturbance to her sleep pattern. She had visited her GDP on several occasions over the preceding 6 months without resolution of her discomfort, despite extraction of tooth 22 and root canal treatment to teeth 23 and 24.

Medical history：

Unremarkable

Special habit：

She was a non-smoker and drank 2 units of alcohol per week.

Clinical examination :

No lymphadenopathy of the head and neck region.

Intraoral :

Non-healing socket where the 22 had been removed 4 months previously. The buccal sulcus was tender to palpation over the apex of the 23, but no swelling or ulceration was apparent. The 23 and 24 were not mobile and were nontender to percussion. She had a good standard of oral hygiene and there was no evidence of periodontal disease.

X-ray finding & treatment course:

- A periapical radiograph revealed a radiolucency and a dense radiopaque foreign body, probably amalgam, at the base of the 22 socket (Fig. 1). The 23 and 24 (Fig. 2) had satisfactory root canal fillings with no associated apical radiolucencies and good periodontal support.

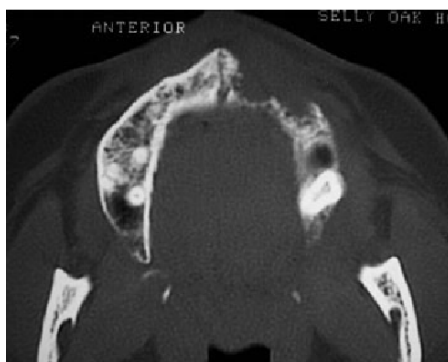


- She was prescribed a course of amoxicillin and reviewed a week later. As her symptoms had not improved the 22 socket was surgically investigated. During this procedure, granulation tissue was removed but not submitted for histopathology. Curettage of the 22 socket and a further two courses of amoxicillin failed to resolve her symptoms so the 23 and 24 region was investigated and an apicoectomy performed on both teeth. Soft tissue was curetted from around the apices of 23 and 24 resulting in an oro-antral communication due to loss of bone. The histology revealed chronically inflamed granulation tissue.
- Three months after her presentation to the dental hospital and 9 months following onset of her symptoms, radiographic follow-up revealed destructive bony changes (Fig. 3).

The 23 and 24 apical radiolucency had increased in size, showed perforation of the cortical bone and loss of the bony antral floor (Fig. 3).



- As a consequence, a further biopsy was performed, which revealed extensive soft tissue replacement of the left maxillary alveolar process extending from close to the palatal midline, posteriorly to the left maxillary buttress and superiorly towards the floor of the nose. Extraction of the 23 led to the simultaneous removal of the 24 encased in a loose segment of surrounding maxillary alveolus.
- A preliminary diagnosis of lymphoma was made and the patient referred for further assessment and management.
- A computerized tomography (CT) scan showed destruction of the left maxillary alveolus (Fig. 4).



- Further biopsy confirmed a diagnosis of non-Hodgkin's lymphoma of the left maxilla.

Additional investigations showed that there were no other lesions elsewhere in the body and thus the disease was classified stage 1AE (single extranodal site without systemic signs of disease).

- She was treated with radiotherapy to the left maxilla and chemotherapy. Seven years later the patient has no signs of recurrence and remains under annual review.

#### Discussion

- Typically odontogenic inflammation results in pain, widening of the periodontal ligament space, and the development of a periapical radiolucency that is usually well defined. Occasionally developmental anomalies, metabolic diseases and malignancies can resemble dental inflammatory disease but do not respond to root canal treatment or tooth extraction. In this situation the clinician should review the accuracy of the diagnosis so that the appropriate treatment is not delayed.
- Extranodal lymphoma of the jaws may initially present, particularly in the early stages, with unspecific signs and symptoms mimicking periapical disease (Slootweg et al. 1985, Macintyre 1986). Lymphomas can become secondarily infected and present with swelling mimicking a dental abscess (Rog 1991, Bavitz et al. 1992, Ardekian et al. 1996). The initial clinical impression of inflammatory disease was supported when antibiotic therapy appeared to reduce symptoms (Keyes et al. 1988). Whilst many malignant lesions are easily recognized there are situations when they resemble other conditions.
- Certain clinical features such as increased tooth mobility in the absence of advanced periodontal disease and neurosensory disturbances may point towards non-odontogenic disease, they may not be present initially (Gusenbauer et al. 1990). Similarly, radiographs used to investigate dental disease may demonstrate findings such as poorly defined or 'moth-eaten' osteolytic lesions (Macintyre 1986), root resorption and erosion of crestal bone, which are not typical for odontogenic lesions. However, destructive radiographic changes may not be

evident in slow growing lymphomatous lesions of the jaws (Keyes et al. 1988, Rog 1991).

- Malignant disease involving bone can resemble periapical inflammatory disease particularly when the latter is infected changing its margin so it is less well defined.
- It is important to review the clinical features and radiological findings, and when these are unusual the diagnosis needs to be reconsidered rather than persisting with inappropriate treatment.

→early referral to a secondary setting for specialist opinion must always be considered

#### Comment

- During the 6-month period prior to the patient's attendance in the hospital, it is quite clear that several therapeutic attempts aimed at what was thought to be an odontogenic problem had failed.
- The non-healing extraction socket was attributed to the foreign body visible on the radiograph and surgically revised without obtaining any material for histopathological examination. Although an unlikely cause for the patient's symptoms, it is not unreasonable to remove a foreign body from a non-healing socket.
- The long history and failure to respond to previous treatment should have raised the suspicion that the condition was not infective and a tissue sample for histopathological examination should have been retrieved (Rog 1991).
- Histologically, the distinction between lymphoma and periapical inflammation is often challenging, and as in this and other cases, lymphoma has been interpreted as being inflammatory in nature (Keyes et al. 1988, Richards et al. 2000).

→取檢體時的人為疏失：inadequate biopsy specimens and poor handling of the tissue by the clinician leading to 'crush artifact' which obscures the fine cytological detail needed to distinguish between benign and malignant lymphocytes.

→取檢體時的困難性：difficult to obtain an adequate tissue sample because of the close location to roots

→要怎麼使我們取得的檢體更準確：to increase the chances of accurate diagnosis, large specimens representative of the tumor are required

→one biopsy may be insufficient to make a diagnosis and re-biopsy of non-healing lesions including bone within the sample may be required.

→本case得到正確診斷的檢體來源：the soft tissue samples retrieved during the course of treatment were found to be consistent with a chronic inflammatory lesion. The histopathological diagnosis of lymphoma was made from the hard tissue block accidentally retrieved during the extraction of the associated teeth.

→in order to obtain a correct diagnosis earlier, a block biopsy of the affected bone may have been required to yield the true nature of the disease process.

- In the study by Maxymiw et al. 2001 a high percentage of patients with NHL had dental symptoms. These cases often demonstrate recurrent or protracted disease patterns
- NHL of the head and neck has a good prognosis with a median survival rate of 10–15 years but the prognosis is improved with early diagnosis (Payne & al-Damouk 1993).

#### Conclusion

- Despite its rare occurrence, dentists must consider lymphoma in the differential diagnosis of pain, swelling, ulceration and non-healing periapical inflammation.
- Dentists should have a high index of suspicion for lesions (including periapical

lesions) that do not respond to conventional therapy or appear unusual in other ways and as such have a role in early diagnosis and prompt referral of patients for specialist secondary care.

- The possibility of false negative biopsy results must be considered and referral to specialist care may be warranted even in a case of a negative initial biopsy result.

題號	題目
1	關於Non-Hodgkin's lymphoma的來源，最常見為以下何者? (A) B-lymphocyte (B) T-lymphocyte (C) Histiocyte (D) 由B-lymphocyte和T-lymphocyte來源的機率差不多
答案()	出處：Oral & Maxillofacial Pathology p.517
題號	題目
2	關於Non-Hodgkin's lymphoma的描述，何者為非? (A)發生機率而言，發生在淋巴結內的機率高於淋巴結外(extranodal lymphomas) (B)在口腔內發生的Non-Hodgkin's lymphoma，若是發生於軟組織中，臨床上常造成生長緩慢，有壓痛(tender)的mass (C)在口腔內發生的Non-Hodgkin's lymphoma，若是發生於軟組織中，常會發生於頰側前庭區(buccal vestibule)，牙齦(gingiva)，硬顎後部(posterior hard palate) (D)在口腔內發生的Non-Hodgkin's lymphoma，若是發生於硬組織中，常會導致不明確的疼痛而讓人誤以為是牙痛。 (E)X光片看來，可能呈現ill-defined、ragged radiolucency，但初期也可能難以從X光片看出明顯的變化而導致誤診。
答案()	出處：Oral & Maxillofacial Pathology p.519, P520