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內文：

Abstract

- 目的:回顧21年期間該機構所發現osteogenic sarcoma的病例
- 研究設計: 分析1983.01~2003.12期間, 病理診斷為osteogenic sarcoma病人的資料, 包括年齡, 性別, 腫瘤的histological types
- 結果: 1) 發生率: osteogenic sarcoma of the jaws 佔所有oral and jaw lesions的0.6%
2) 年齡: Patients with OS: 27.2 yrs (11-70)
Patients with maxillary lesions平均年齡: 30.7 yrs (17-70)
Patients with mandibular lesions平均年齡: 23.4 yrs (11-41), 發生於下顎的病人年紀比較小, 但在統計上兩者並無顯著差異
3) 性別: 12 male, 5 female (2.4:1)
4) 位置: maxilla -- 9 cases, mandible – 8 case (1.1:1); 男性主要發生於上顎, 女性主要發生於下顎.
5) histological types: chondroblastic(47%), fibroblastic(35.3%), osteoblastic(17.7%)
- 結論: Osteogenic sarcoma of the jaws is rare in patients who presented with tumor and tumor-like lesions of the jaws in our center, in agreement with previous reports from Africa and other centers around the world. However, the mean age at presentation of our patients was lower than reported in other parts of the world.

INTRODUCTION

- Osteosarcoma (OS) – 1) a rare but highly malignant bone tumor
2) also the most common primary malignant lesion of bone in patients under 40 years, excluding multiple myeloma.
- 發生率(其他文獻) -- Osteosarcomas account for about 20% of all sarcomas, and about 6% to 7% of all osteosarcomas occur in the maxillofacial region.
- 位置: most often -- the long bones, with predilection for the distal femoral metaphysis, proximal tibia, and humeral metaphysis.
- 年齡: the second decade is the most common age of incidence of OS in long bones.
- Mortality rate: 1) in long bone: high, 5-year survival around 20%.
2) in the maxillofacial bones -- the presentation of the tumor at a later age, its higher survival rate, and a lower incidence of metastasis are believed to differentiate it from OS in other locations.

MATERIALS AND METHODS

- 時間: 1983.01~2003.12
- 條件: all cases histologically diagnosed as osteosarcoma of the jaws
- 分析: age, gender, and symptoms at presentation, site of occurrence and histologic subtypes of tumor, using the software SPSS for Windows (version 11.0; SPSS, Chicago, Ill). Simple frequency charts, descriptive statistics, and test of significance were used as appropriate.

RESULTS

- 發生率: 1) primary malignant bone tumor of jaws-- 59 cases (out of 2,830 biopsies of oral and jaw lesions, **2.08%**

- 2) osteosarcoma--17 cases, 28.8% in primary malignant bone tumor (most frequently occurring, see Table I), **0.6%** in all oral and jaw lesions
2. 年齡: 1) The mean age of patients with OS-- 27.2 +- 13.6 years (range 11-70 years). (Table II).
 - 2) Patients with maxillary lesions-- 30.7 +- 15.8 years (range 17-70 years),
 - 3) Patients with mandibular lesions-- 23.4 +- 10.1 years (range 11-40 years)
- 4) Lower mean age of patient with mandibular lesions, however, no statistical significance difference between Mx and Md lesions
3. 性別: 12 male and 5 female (2.4:1)
4. 位置: 9 (53%) tumors were found in the maxilla and 8 (47%) in the mandible (1.1:1) The mandibular lesions were predominant in female patients (mandible: 4; maxilla: 1), whereas the maxillary lesions were predominant in male patients (maxilla: 8; mandible: 4).
5. The duration of symptoms before presentation: between 2 and 18 months with an average of 6.1 ± 4.3 months.
6. Symptoms: swelling, painful swelling, trismus, and nonhealing of extraction sockets (Table II). Most of our patients presented late with massive swelling (Figs. 1 and 2).
7. Predisposing factors: no history of predisposing factors (previous radiation, Paget's disease of bone, fibrous dysplasia, and trauma) in any of the patients.
8. 術前X光影像: nonspecific osteodestructive lesions (Figs. 3 and 4) in most cases
9. Histologic subtype: chondroblastic, 47% (Fig. 5), followed by fibroblastic 35.3% (Fig. 6), and osteoblastic, 17.7% (Fig. 7)
10. 治療方式: Surgical excision with or without postoperative radiotherapy
Poor postoperative follow-up owing to patients' noncompliance
11. 復發: some of the patients had local recurrences within 3 to 9 months after surgery

DISCUSSION

1. OS worldwide: 1) a rare lesion, occurring in about 1/100,000 persons / year
 - 2) maxillofacial region, about 6% to 7% of all OS
2. OS of the head and neck is considered by most clinicians to be distinct from OS that arises in the long bones.
 - 1) affect older patients
 - 2) follow a different clinical pattern.
3. Occurrence of OS: 1) de novo
 - 2) subsequent to previous irradiation or Paget's disease of bone, previous fibrous dysplasia, and trauma

All the cases in the present series appeared to have developed de novo; no history of any predisposing factors could be elicited from our patients.
4. Paper review and comparison
 - 1) 發生率: a relatively rare tumor in Nigeria, 6% of all biopsies of oral and jaw lesions.
 - 2) 平均年齡:
 - A. In this study -- 27.2 yrs

Another African study – similar result
Study from other area – higher age
It might be that the disease has an earlier onset in Nigeria.
 - B. In this study: Five patients (29.4%) < 20 yrs
Other African study: 28.6% patients < 20 yrs
 - 3) 年齡與位置
 - A. Jaw vs Other sites

In this study: The mean age of patients with OS of the jaws (27.2) > those reported for OS of the long bones (< 20 years)
Confirming the occurrence of OS of jaw in an older age group
 - B. Mx vs Md

In this study: the average age at presentation of patients with maxillary lesions > those with mandibular lesion, but no statistical significance difference

This contrasts with the findings of Garrington et al., who found maxillary tumors occurring at an earlier age than mandibular lesions.

4) 性別: In this study, OS frequently affected males more than females, in agreement with previous reports. Others, however, have reported female preponderance.

5) 位置

A. Mx vs Md

In this study, maxillary lesions more frequent than mandibular lesions (9:8) in concordance with other reports, but most reports, especially in larger series, reported more mandibular than maxillary lesions.

B. 上下顎好發之位置

Mx: posterior portion of the alveolar process and the antrum;

Md: body, followed by the angle, symphysis, and ascending ramus.

In most cases, it was impossible to determine the exact site of origin of the lesion in our patients because of late presentation with massive swelling.

C. 位置與性別

Md: female

Mx: male

Most published literature on OS of the jaw bones established no relationship between tumor

location and sex of patient, except Forteza et al. who reported that maxillary sarcomas affected females preferentially (4:1) and mandibular sarcomas occurred exclusively in males (4:0)—in sharp contrast to the present report.

5. Clinical manifestations

Swelling, swelling/pain, trismus/swelling, swelling/nonhealing of extraction socket (Table II) of these tumors in this study is in agreement with previous reports. Other authors have also reported hypoesthesia or paraesthesia of the lower lips with mandibular tumors.

In this study: the only constant finding in every patients -- a rapidly growing bone tumor, which is painless or slightly painful

6. Time interval between appearance of the initial symptoms and the first consultation -- 6.1 ± 4.3 months (range 2-18 months), higher than those reported in published literature. Late presentation of tumors is a common finding in Nigeria(Africa). This can be attributed to the fact that most patients in this area regard a considerable number of diseases as “nonhospital diseases” and therefore prefer nonorthodox management.

7. Histological sbutype

1). chondroblastic, most predominant seen in this study, 47% ; fibroblastic, 35.3% ; osteoblastic, 17.7%

2) The general consensus seems not to ascribe any correlation between tumor histology and prognosis.

Clark et al., however, attributed the better prognosis of their cases of OS of the jaws to the occurrence of predominantly chondroblastic low-grade tumors.

Doval et al. also reported that patients with chondroblastic OS had a better prognosis than those with other histologic components.

8. Treatment modalities: surgery, chemotherapy, and radiation therapy

Surgery → the gold standard for the treatment of head and neck sarcomas with radiotherapy and chemotherapy as adjuvants.

Surgery → recommended for low grade lesions of minimum-to-moderate size where clear margins are obtainable with acceptable morbidity.

Radiotherapy → reserved for the treatment of jaw OS with a possibility of tumor-positive margins after surgical resections or in cases of local inoperable recurrences.

Chemotherapy → most clinicians agree that there is a role for chemotherapy in OS of the jaws, but there is a question of whether to give it before or after surgery.

In this study: Surgical excision with or without postoperative radiotherapy

9. Local recurrences: within 3 to 9 months after surgery

This may be attributable to large sizes of the lesions at initial diagnosis.

Conclusion

Osteogenic sarcoma of the jaws is rare in patients who presented with oral and jaw lesions in our center in agreement with previous reports in African environments and other centers around the world. However, the mean age at presentation of our patients was lower than reported in other parts of the world.

題號	題目
1	Osteosarcoma of jaw 與osteosarcoma of other skeletal bone在臨床與組織上的比較, 下列何者錯誤? (A) Jaw lesion 之分化較差 (B) Jaw lesion 之病人年紀較大 (C) Jaw lesion 轉移之機率較低 (D) Jaw lesion 好發於男性
答案(A)	出處: Oral and maxillofacial pathology, Neville, P.482
題號	題目
2	下列何者不是Osteosarcoma組織學的次分類 (A) Chondroblastic (B) Fibroblastic (C) Osteolytic (D) Small cell osteosarcoma
答案(C)	出處: Oral and maxillofacial pathology, Neville, P.484