

Metastasis of thyroid carcinoma to the mandible.

Case report

S. Anil, BDS, MDS*

P. M. Lal, BDS, MDS†

D. S. Gill, BSc, BDS‡

V. T. Beena, BDS, MDS†

Abstract

Metastatic tumours to the jaw bones are uncommon. The incidence of jaw bone metastasis is difficult to assess accurately since the usual method to determine the distribution of a metastatic tumour has been by a radiographic skeletal survey in which the jaws are rarely included. At times, metastatic lesions of the orofacial region may be the first evidence of dissemination of a known tumour from its primary site. A case of metastatic follicular carcinoma of the thyroid to the mandible is presented. The present case emphasizes the importance of considering metastasis in the differential diagnosis of a radiolucent lesion in the mandible in a patient with a history of any malignant disease.

Key words: Metastasis, jaws, thyroid carcinoma, case report.

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Introduction

Metastases to the oral tissues are rare events that constitute approximately one per cent of all oral malignancies.^{1,2} In the oral cavity the most common site of metastasis is the body of the mandible in the premolar-molar region.² Clausen and Paulsen³ have defined the criteria for diagnosis of metastatic lesions to the mandible. These tumours are of great significance since at times their appearance may be the only symptom of an undiscovered underlying malignancy and may be the first evidence of dissemination of the known tumour from its primary site.

Thyroid carcinoma is the most frequently diagnosed endocrine carcinoma and the most

common cause of death among patients with these tumours.⁴ Bone metastases are found in 1-3 per cent of well-differentiated thyroid carcinomas, occurring more often in follicular carcinoma and in patients more than 40 years of age. The presence of a distant metastasis in an adult is associated with poor prognosis with an overall mortality of 50 per cent within 1-6 years postoperatively.^{5,6}

A case of metastatic thyroid carcinoma in the mandible is presented here. The clinical and histopathological features are discussed.

Case report

A 61 year old female patient reported to the outpatient department of Government Dental College and Hospital, Trivandrum, with a complaint of pain and swelling in the right side of the angle of the mandible. She had noticed the swelling three months previously and it had increased gradually to the present size. One month earlier she had undergone extraction of the right mandibular third molar for complaints of mobility and pain. After that she noticed an increase in size of the swelling with pain radiating to the neck. The medical records revealed that the patient had been treated surgically for follicular carcinoma of the thyroid eight years previously.

On examination, a firm, diffuse swelling of size 40 × 30 mm was noticed in the retromolar region extending to the ramus of the right side of the mandible. On palpation, bicortical expansion of the ramus of the mandible was noted (Fig. 1). Intra-orally there was an erythematous change over the retromolar region and adjacent buccal mucosa. Tender submandibular lymph nodes were palpable on the affected side.

Radiographic examination showed a well-circumscribed lesion extending from the lower

*Department of Oral Medicine and Pathology, United Medical and Dental Schools of Guys and St Thomas Hospitals, London, UK.

†Department of Oral Pathology and Microbiology, Dental College, Trivandrum, India.

‡Vocational trainee, London, UK.

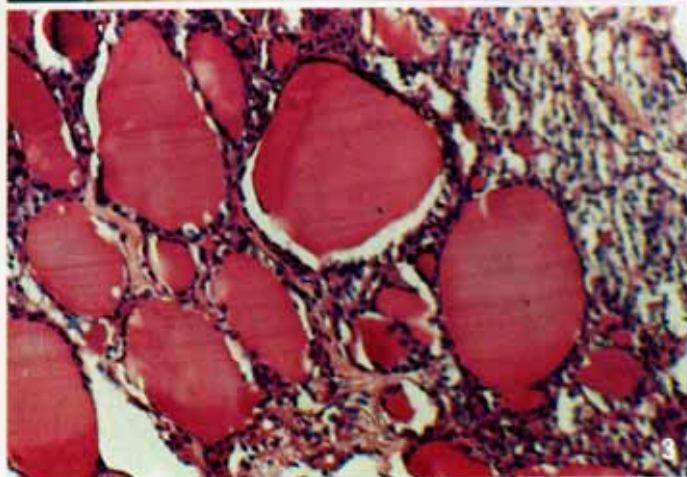


Fig. 1. - Intra-oral photograph showing the metastatic lesion at the retromolar region.

Fig. 2. - Lateral oblique view of the mandible showing the radiolucent lesion at the right ramus region.

Fig. 3. - Photomicrograph of the lesion showing the well-differentiated thyroid follicles with abundant colloid. $\times 250$.

border of the angle of the mandible to the coronoid and condylar processes (Fig. 2). An incision biopsy was performed. The histopathological examination revealed well-developed thyroid follicles with abundant colloid resembling normal thyroid tissue (Fig. 3).

Discussion

Malignant neoplasms rarely metastasize to the oral region despite the fact that many common primary neoplasms frequently metastasize to bone. Secondary deposits occur more commonly in the mandible than the maxilla; the premolar-molar region is the most frequent site affected. This region is rich in haemopoietic tissue and as the mode of metastasis is haematogenous, the neoplastic cells become deposited in the vascular haemopoietic tissue. A reduced flow of blood in the area could help the cells become deposited here.^{7,8} A review by Batsakis showed that out of 115 metastasizing jaw tumours 6.1 per cent constituted thyroid tumours metastasizing to the jaws.¹

The optimal therapy for differentiated thyroid cancer includes thyroidectomy and radiotherapy. The presence of distant metastases is associated with poor prognostic rate with an overall 50 per cent mortality five years postoperatively. An early

detection of metastatic disease improves the overall survival rate and treatment results.⁹

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Address for correspondence/reprints:

Dr S. Anil,
Department of Oral Biology,
Faculty of Dentistry,
The University of Hong Kong,
34 Hospital Road,
Hong Kong.