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Case Report

Bilateral Metastatic Spread of Testicular Teratoma to Mandibular Condyles

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The clinical and radiological features of a patient with metastatic spread of testicular teratoma to both mandibular condyles are presented. It is suggested that in patients with known systemic malignancy, a local metastatic deposit should be considered as a possible cause of unexplained pain in the temporomandibular joints. Copyright © 1996 Elsevier Science Ltd

Key words: condyle, metastasis, temporomandibular joint, teratoma

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INTRODUCTION

One to eight per cent of all oral malignancies are due to metastatic spread of the tumour, particularly from lung, breast, thyroid, prostate, kidney and gut [1–11]. The mandible is more commonly affected than the maxilla [9], the body and ramus being the most common sites of secondary tumours [11]. Patients usually complain of a lump on the gum or jaw bone, pain, paraesthesia and tooth mobility [9, 10]. The condyle is a rare site of metastatic spread of malignancy. The present report details the features of a patient who presented with metastatic spread of testicular teratoma to *both* mandibular condyles.

CASE REPORT

A 43 year old male was referred to the Department of Oral Medicine by oncologists for investigation and treatment of worsening pain and swelling of both parotid areas. The swelling of the left side had developed 4 months previously and was not changing in size or shape. Of late, however, the patient had had slight swelling and intermittent discomfort associated with the right temporomandibular area. The pain was an intermittent ache, worsened with eating, and radiated to the right ear. Over the past few months the patient had noticed that his teeth no longer met correctly and that had he mild trismus with resultant difficulty in mastication and speech. There was no history of previous trauma to the face.

A review of systems revealed nothing of note and in particular, the patient's weight was remaining stable. The patient had previously been diagnosed as having testicular classic seminoma (based upon histopathological findings), with spread to the left common iliac, paraaortic, paratracheal and right supraclavicular groups of lymph nodes, that had responded suboptimally to radiotherapy to the right supraclavicular area and 14 courses of chemotherapy that included cisplatin, vincristine, bleomycin and etoposide. At the time of referral, the patient had had no chemotherapy for the previous 4 months, was known to have slight retrocrural lymph node enlargement and a greatly raised serum level of β human chorionic gonadotropin (βhCG:3219 IU/l (normal range <5 IU/l)) indicating the diagnosis of teratoma rather than seminoma. The patient had mild renal failure secondary to cisplatin toxicity with associated hypocalcaemia and hypomagnesaemia for which he was receiving appropriate supplements, and bilateral hearing loss and tinnitus, also secondary to cytotoxic therapy.

The patient was married, an unemployed carpet salesman, and did not smoke tobacco or drink alcohol.

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Clinical examination revealed no supraclavicular lymphadenopathy, anaemia or clubbing, but there was a diffuse non-tender swelling of the masseteric region of the right side and, although there was no overlying swelling, the condyle of the right temporomandibular joint could not be palpated. There was only slight, diffuse non-tender swelling of the left parotid gland. There was limited mouth opening (less than two patient finger widths' distance between upper and lower incisors) and although there was no deviation of the mandible upon opening or closing there was some occlusal asymmetry, the mandible being deviated half the width of a lower incisor to the left.

A pan-oral tomograph revealed a cotton-wool-like diffuse radiolucency of the right mandibular condyle and right posterior ramus (Fig. 1). While transcranial plain radiographs could not visualise the right condyle, the left mandibular condyle had an anterior location both on opening and closing of the mouth. It was thus evident that the patient's swelling and pain were associated with temporomandibular joint disease. In view of the abnormal radiolucency of the right mandibular condyle and ramus, anterior placement of the left condyle, and the presence of disseminated malignancy, metastatic deposits of teratoma were suspected.

Computed tomography confirmed destruction of the right mandibular condyle extending into the mandibular ramus with inferior dislocation of the condyle (Fig. 2). In addition, there was loss of bone density of the left mandibular condyle and upper ramus suggesting tumour at this site also. The parotid enlargement of the left side was due to enlargement of a salivary gland lymph node. Hence, the final diagnosis was bilateral metastatic deposits of teratoma in the mandibular condyles and temporomandibular joints.

The patient started a course of local radiotherapy to the left and right temporomandibular joints (total tumour dose 1750 cGys, six treatments over 9 days) and subsequently developed transient oral mucositis and xerostomia which were managed with ofloxacin (400 mg daily), salivary substitutes (Saliva Orthana®), 0.05% (w/w) fluoride and 0.2% (w/w) chlorhexidine gluconate mouth rinses. The trismus and swelling gradually improved. However, the patient subsequently developed further metastatic disease in the mediastinum, right chest wall, left ilium and lower shaft of left femur and died 5 months after initial referral to the Department of Oral Medicine. The patient's family refused post-mortem.

Figure 1. Abnormality of form and radiolucency of right mandibular condyle and ramus.

Figure 2. Destruction of right condyle as denoted on computed tomography (CT).

DISCUSSION

Metastatic spread of malignancy to the mandibular condyle is remarkably uncommon [12–28] and to our knowledge this is the first report of spread of testicular teratoma to the mandible [28–31], and one of the only examples of bilateral condylar involvement of any distant malignancy. The frequency of metastatic spread of any malignancy to the mandibular condyle is low for unknown reasons. However, it may possibly reflect poor local blood supply, lack of haemopoietic marrow and/or the presence of an osseous plate that limits spread of malignancy into the marrow of the condyle.

In the present patient, the underlying malignancy was initially thought to be a seminoma, the most common testicular tumour of adults, and which typically metastases via the lymphatics. However, as the patient had elevated levels of α-fetoprotein (AFP) and β human chorionic gonadotropin (βhCG) it was likely that the malignancy was a testicular teratoma [29]. There are very few reports of metastatic spread of testicular tumours (including seminomas and teratomas) to the orofacial tissues. Similar to over 50% of previously reported cases of metastatic spread of malignancy to the mandibular condyle, the present patient had symptoms and clinical signs suggesting temporomandibular joint dysfunction. However, it was only by detailed radiographic investigation that the precise cause was established. While histopathological diagnosis of teratoma of the mandibular condyle was not possible, the widespread metastasis of this patient's tumour, together with the radiological features of boney destruction and good response to local radiotherapy, strongly suggests that the patient's oral symptoms were due to metastatic disease. The present case clearly illustrates that in a patient with a known malignancy, a metastatic condylar lesion should be high on the list of differential diagnoses of pain and swelling of the temporomandibular joint.

1. Agerberg G, Soderstrom U. Metastasis of mammary carcinoma to the mandibular condyle. *Int J Oral Surg* 1975, **3**, 24–40.
2. Ameli M, Capaccio A. Localizzazione metastatica isolata del condilo mandibolare da carcinoma broncogeno. *Arch Ital Laring* 1965, **73**, 165–176.

3. Aniceto GS, Penin AG, Mata Pages R de la, Moreno JJM. Tumors metastatic to the mandible. *J Oral Maxillofac Surg* 1990, **48**, 246–251.
4. Batsakis JG, McBurney TA. Metastatic neoplasms to the head and neck. *Surg Gynecol Obstet* 1971, **133**, 673–677.
5. Butler JH. Myofacial pain dysfunction syndrome involving tumour metastatis. Case report. *J Periodontol* 1975, **46**, 309–311.
6. Calonius PEB, Sanio P, Oikarinen VJ. Metastatic tumors to the oral region. Report on 13 cases. *Proc Finn Dent Soc* 1975, **71**, 66–71.
7. Castigliano SG, Rominger CJ. Metastatic malignancy of the jaws. *Am J Surg* 1954, **87**, 496–507.
8. Chandry AP, Stoesz AR, Vickers RA. Seminoma metastasizing to the oral cavity. *J Oral Surg* 1961, **19**, 346–349.
9. DeBoom GW, Jenson RP, Miller RI. Metastatic tumors of the mandibular condyle. *Oral Surg Oral Med Oral Pathol* 1985, **60**, 512–516.
10. Degnan EJ. Oral metastatic seminoma with embryonal carcinoma. Report of case. *J Oral Surg* 1970, **28**, 749–754.
11. Epker BN, Merrill GR, Henny FA. Breast adenocarcinoma metastatic to the mandible. Report of seven cases. *Oral Surg Oral Med Oral Pathol* 1969, **28**, 471–479.
12. Fantasia JE. A testicular tumour with gingival metastasis. *Oral Surg Oral Med Oral Pathol* 1979, **48**, 64–68.
13. Gerlach KL, Horch H-H, Lacroix WF de. Condylar metastasis from bronchial carcinoma. *J Maxillofac Surg* 1982, **10**, 250–252.
14. Hartmann GL, Robertson GR, Sugg WE, Hiatt WR. Metastatic carcinoma of the mandibular condyle: report of case. *J Oral Surg* 1973, **31**, 716–717.
15. Hecker R, Noon W, Elliott M. Adencarcinoma metastatic to the temporomandibular joint. *J Oral Maxillofac Surg* 1985, **60**, 512–516.
16. Karr RA, Best CG, Salem PA, Toth BB. Synovial sarcoma metastatic to the mandible: report of two cases. *J Oral Maxillofac Surg* 1991, **49**, 1341–1346.
17. Krestin I. Vzacna metastazo malignilo teratomu do dutiny ustni. *Cesk Stomatol* 1962, **62**, 42–46.
18. Mace MC. Condylar metastasis from mammary adenocarcinoma. *Br J Oral Surg* 1977, **15**, 227–230.
19. Mizukawa JH, Dolwick FM, Johnson PR, Miller RJ. Metastatic breast adenocarcinoma of mandibular condyle: a report of a case. *J Oral Surg* 1980, **38**, 448–451.
20. Peacock TR, Fleet JD. Condylar metastasis from a bronchiogenic carcinoma. *Br J Oral Surg* 1982, **20**, 39–44.
21. Gerlach KL, Horch H-H, Lacroix WF de. Condylar metastasis from bronchial carcinoma. *J Maxillofac Surg* 1982, **10**, 250–252.
22. Thatcher SL, Dye CG, Grau MJ, *et al.* Carcinoma of the prostate metastatic to the mandibular condyle mimicking a parotid tumour. *J Oral Maxillofac Surg* 1986, **44**, 394–397.
23. Owen DG, Stelling CB. Condylar metastatis with initial presentation as TMJ syndrome. *J Oral Med* 1985, **40**, 198–201.
24. Hecker R, Noon W, Elliott M. Adenocarcinoma metastatic to the temporomandibular joint. *J Oral Maxillofac Surg* 1985, **43**, 629–631.
25. DeBoom GW, Jenson RP, Miller RI. Metastatic tumours of the mandibular condyle. *Oral Surg Oral Med Oral Pathol* 1985, **60**, 512–516.
26. Rubin MM, Jui V, Cozzi GM. Metastatic carcinoma of the mandibular condyle presenting as temporomandibular joint syndrome. *J Oral Maxillofac Surg* 1989, **47**, 507–510.
27. Wolujewicz MA. Condylar metastatis from a carcinoma of the prostate gland. *Br J Oral Surg* 1980, **18**, 175–182.
28. Karr RA, Best CG, Salem PA, Toth BB. Synovial sarcoma metastatic to the mandible: report of two cases. *J Oral Maxillofac Surg* 1991, **49**, 1341–1346.
29. Richie JP. Neoplasms of the testis. In Walsh P, Retik AB, Stamey TA, Vaughan ED, eds. *Campbell's Urology*, 6th Edition. Philadelphia, Saunders, 1992, 1222–1263.
30. Krestin I. Vzacna metastaza malignilo teratomu do dutiny ustni. *Cesk. Stomatol* 1962, **62**, 42–46.
31. Zohar Y, Ben-Tovim R, Gal R, Laurian N. Metastatic carcinoma of oral soft tissue. *Head Neck Surg* 1985, 7, 484–486.

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