An unusual case of acute onset lower lip numbness

Introduction

Mental nerve neuropathy or 'numb chin syndrome' is a neurological symptom associated with both local and systemic factors. It may be the first manifestation of systemic malignancy, signal the spread of a previously diagnosed malignancy or be the result of local infiltration of the mental nerve by tumour. Local factors include trauma to the mandible, expanding compressive lesions such as cysts, impacted teeth, local infections or iatrogenic causes. Patients typically develop paraesthesia or numbness of the lower lip or chin which may be of sudden or gradual onset.

Discussion

Mental paraesthesia is one component of trigeminal sensory neuropathy and may be a rare neurological symptom of systemic malignancy. This syndrome is reported to precede a diagnosis of malignancy in up to 47% of cases. Although it is mainly unilateral, bilateral presentation may occur in 10% of cases (Laurencet et al, 2000).

Metastases of breast, lung and prostate cancer are recognized causes of mental neuropathy as are less commonly multiple myeloma and lymphoma (Dumas and Pérusse, 1999; Vigano et al, 2007). However, jaw metastasis is a rare event with a peak incidence in the seventh decade, with primaries originating from below the level of the clavicle, reportedly occurring in less than 1% of systemic malignancies (Dumas and Pérusse, 1999; Laurencet et al, 2000). In one case series of longstanding trigeminal sensory neuropathy, four of nine cases had trigeminal neuropathy secondary to systemic malignancy with three displaying neuropathy of more than one division and/or involvement of another cranial nerve (Shotts et al, 1999).

Although a number of pathogenic mechanisms involved in mental neuropathy have been reported, compression of the mental nerve caused by bone marrow infiltration has been proven in cases of lymphoma (Laurencet et al, 2000). Mental paraesthesia may be an important prognostic symptom reflecting the extent of infiltration of intraoral lesions (Sanchis et

Dr Anne Hegarty *is Specialist Registrar in Oral Medicine and* **Dr Tim Hodgson** *is Consultant/Honorary Lecturer in Oral Medicine, Unit of Oral Medicine, UCL Eastman Dental Institute and UCLHT, Eastman Dental Hospital, London WC1X 8LD*

Correspondence to: Dr A Hegarty

Figure 1. Panoramic radiograph showing generalized osteoporosis.

Case Report

An 84-year-old Caucasian woman was referred by her primary care dentist to the authors' department with progressive lower lip numbness of 2 months' duration initially noticed by the patient during toothbrushing. The paraesthesia was initially intermittent but became permanent within 1 month. The patient had not sustained any injury to the jaws and no dental treatment had been provided before symptoms started. A course of empirical antibiotics had no impact.

She was previously diagnosed with hypertension, ischaemic heart disease and atrial fibrillation for which she was prescribed lisinopril, valsartan, atorvastatin, digoxin and warfarin. She had no known allergies. She was a non-smoker and drank alcohol occasionally. She was the main carer for her husband who suffers from multiple sclerosis.

Clinical examination revealed reduced sensation to light touch and pinprick in the distribution of the left mental nerve. No other cranial nerve abnormalities were noted. Apart from mild tenderness in the left buccal sulcus opposite the lower left first premolar and a polyp-like lesion on the lower left lip, no other intraoral abnormalities were found.

Initial blood tests including full blood count, haematinics, liver and renal function, glucose, erythrocyte sedimentation rate and bone profile were performed to rule out possible systemic causes of mental paraesthesia and were unremarkable. A panoramic radiograph (*Figure 1*) showed generalized osteoporosis with a loss of the lower border cortex and inferior dental canal outlines bilaterally. Subsequent magnetic resonance imaging (*Figure 2*) revealed extensive T1 areas of low marrow signal throughout the skull vault, skull base, cervical vertebrae and the clavicles with the entire left side of mandible showing reduced T1 signal in keeping with mandibular marrow replacement. The appearances were consistent with extensive bone metastatic disease with marrow infiltration of the left side of the mandible involving the mental nerve. Further blood tests revealed normal immunoglobulins and absence of paraprotein.

Oncological referral and further investigation including chest X-ray, whole body computed tomography scan and bone marrow aspiration and trephine confirmed a diagnosis of follicular lymphoma.

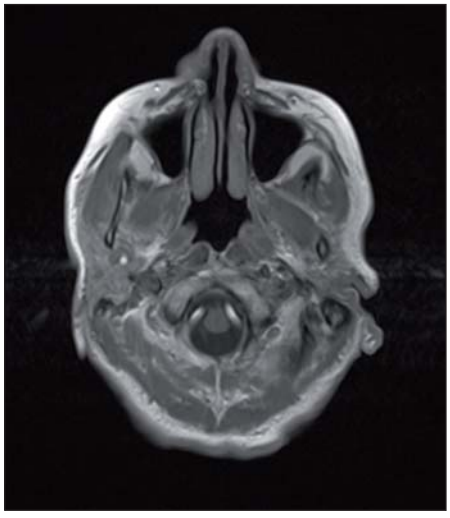

Figure 2. Magnetic resonance image showing reduced mandibular marrow T1 signal in keeping with mandibular marrow replacement.

al, 2008) and malignancy should always be considered in the differential diagnosis even when imaging results are negative (Dumas and Pérusse, 1999; Shotts et al, 1999).

Local factors are more readily recognized clinically and excluded using imaging (Shotts et al, 1999; Ozkan et al, 2008). Owing to its serious implications mental neuropathy must therefore always be carefully investigated.

Conclusions

This case highlights the importance of recognizing mental nerve neuropathy as a symptom of systemic malignancy to ensure prompt diagnosis and institution of appropriate treatment leading to a greater chance of a favourable prognosis. BJHM

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