The Journal of Laryngology and Otology
May 1998, Vol. **112**, pp. 469–471

Clinical Records

Multiple myeloma presenting with external ear canal mass

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Abstract

The manifestations of multiple myeloma are protean and related to bony osteolytic lesions, and to medullar and renal insufficiency. We report a patient who presented with otalgia as the inaugural symptom of multiple myeloma. Local irradiation combined with systemic chemotherapy led to the disappearance of the temporal bone mass and the accompanying symptoms. To date, 24 months after the diagnosis, the patient is still in remission.

The literature on otological involvement in multiple myeloma is reviewed. Symptoms are non-specific and include hearing loss, tinnitus, dizziness, facial paralysis, and otalgia. The diagnosis of multiple myeloma should be considered in the presence of a temporal bone mass.

Key words: Ear; Multiple myeloma; Pain; Drug therapy; Radiotherapy

Introduction

Multiple myeloma (MM) accounts for 10 per cent of haematological malignancies and one per cent of all cancer-related deaths (Alexian and Dimopulos, 1994; Bataille and Harousseau, 1997). MM is a neoplastic proliferation of monoclonal plasma cells within the haematopoietic bone marrow. Symptoms are related to these osteolytic lesions (skeletal pain, pathological fractures, hypercalcaemia), to the replacement of bone marrow by the neoplastic process (immunosuppression resulting in increased bacterial infections, anaemia, bleeding), and to renal insufficiency.

The diagnosis of MM requires at least two of the following criteria (Barlogie, 1995; Selby and Gore, 1995): 1) serum or urinary monoclonal immunoglobulin which can be composed of the entire immunoglobulin protein, of complete light chains, or various fragments; 2) bone-marrow infiltration by large and immature plasma cells; 3) osteolytic lesions. Several staging systems have been described (Barlogie, 1995; Selby and Gore, 1995).

Since MM is a systemic illness, involvement of the temporal bone is possible. Nevertheless, otological symptoms in MM have rarely been described. A case is reported in which the presenting signs of MM were otological. The literature on temporal bone involvement in MM is reviewed.

Case report

A 70-year-old male, without previous medical history, consulted because of progressively worsening right earache of six months duration. He did not complain of hearing loss, tinnitus, or dizziness.

Clinical examination revealed a right external ear canal partially obstructed by a subcutaneous, smooth mass, located on the posterior bony-cartiligenous junction. The tympanic membrane was intact. Tuning fork testing was normal and symmetrical. A right peripheral facial paresis was present.

A temporal bone computed tomography (CT) scan (Figure 1a) showed an osteolytic lesion, 2.5 cm in diameter, enhanced by contrast material, and replacing the right mastoid. The mass eroded the posterior canal wall and protruded in the posterior fossa. A second osteolytic lesion was found at the level of the right occipital condyle. These lesions exhibited homogeneous enhancement with gadolinium on magnetic resonance imaging (MRI) (Figure 1b).

A biopsy of the external auditory canal mass was performed under local anaesthesia. The pathology showed a proliferation of atypical plasma cells compatible with a multiple myeloma (Figure 2) and immunohistochemical staining was positive for the Kappa light chains and negative for the Lambda light chains (not shown).

Further investigations, including a skull and skeletal X-rays, a protein electrophoresis, an immunoelectrophoresis and a bone marrow biopsy, permitted the diagnosis of IgG-Kappa multiple myeloma, without renal failure, anaemia, or hypercalcaemia. The disease was thus staged as IIIa.

The patient was treated with Alkeran and Prednisone, and local radiation therapy delivered through two lateral weighted fields for a total dose of 30 Gy (6 MeV photons; 10 fractions of 3 Gy).

Three months after this treatment, the patient was greatly improved. The otalgia and facial paralysis resolved. The external auditory canal lesion regressed completely.

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Accepted for publication: 4 March 1998.