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CASE REPORT

Condylar metastasis involving TMJ and TMJ dislocation presenting as the initial manifestation of squamous lung cancer

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KEYWORDS

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Summary Lung cancer is the most frequently encountered cancer in humans and commonly metastasizes to brain and bone. A case is presented of a 65-year-old man with squamous cell carcinoma of the lung that metastasised to the temporomandibular joint (TMJ). The case is unusual in many respects. The TMJ was displaced and destructed by the tumor and it was the initial manifestation of squamous lung cancer.

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Introduction

Lung cancer is the most frequently diagnosed cancer and the most common cause of cancer related death in both men and women in the world.^{1,2} Lung cancer commonly metastasize to the regional lymph nodes, liver, adrenal glands, bones and kidney.³ Metastatic malignant tumors of the condyle of the mandible involving the temporomandibular joint (TMJ) are rare. We present here an unusual case of metastatic squamous cell carcinoma of the condyle of mandibula involving TMJ and the site of the primary tumor was the lung.

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Case report

A 65-year-old man was referred to the department of Otolaryngology Head and Neck Surgery at the University of Marmara with a complaint of pain and dislocation of the right TMJ. To the date, the patient had no respiratory symptoms like cough, dispnea or hemophtsis. We learned the detailed history that the patient was an occasional social drinker and no history of smoking. Initial otolaryngeal examination showed dislocation and sensitiveness in the area of the right TMJ. There were no abnormal findings on the other physical examination. Computed tomography (CT) and magnetic resonance imaging (MRI) scans with contrast revealed a bulky lesion in the right infratemporal fossa with extensive destruction of the condyle and TMJ extending to the parotid gland (Fig. 1). Fine needle aspiration biopsy was performed

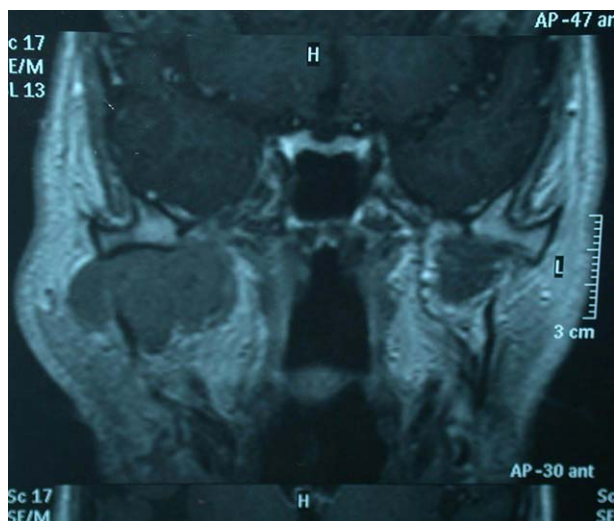


Figure 1 Magnetic resonance imaging (MRI) scans with contrast revealed a bulky lesion in the right infratemporal fossa with extensive destruction.

and the histopathological diagnosis was squamous cell carcinoma (Fig. 2). The chest CT revealed a parenchymal lesion, in the right hilar region which was obliterating the main bronchus (Fig. 3). Bronchoscopic examination was performed in the department of the Chest Surgery. A white colored endobronchial growth with necrotic surface was seen, obliterating the right main bronchus and biopsy was obtained. Histopathology showed a squamous cell carcinoma of the lung. The primary lung tumor was operable and right pulmonectomy were done in the Department of the Chest Surgery. Mandibular condyle and the mass was excised in the department of Otolaryngology Head and Neck Surgery. The specimen histology was squamous cell carcinoma metastasis of the lung. Oral function, nutritional status, and quality of life improved after this surgery. Combination chemotherapy was commenced with cisplatin and etoposide. Despite the treatment, he died from multiple metastasis after a few months.

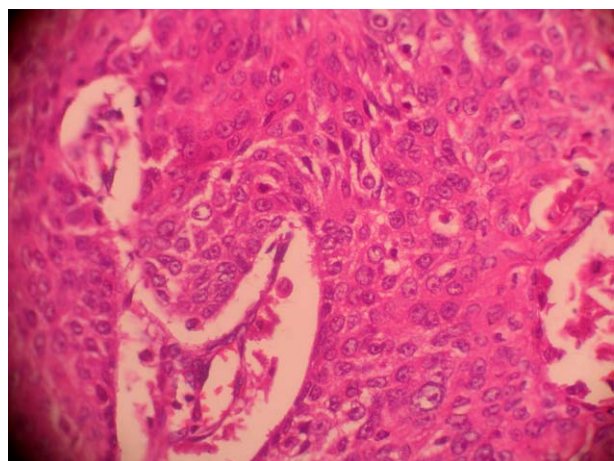


Figure 2 Histopathological examination revealed a solid foci of the squamous cell carcinoma with some mitotic figures and apoptotic bodies (Hematoxylin & Eosin; 200×).

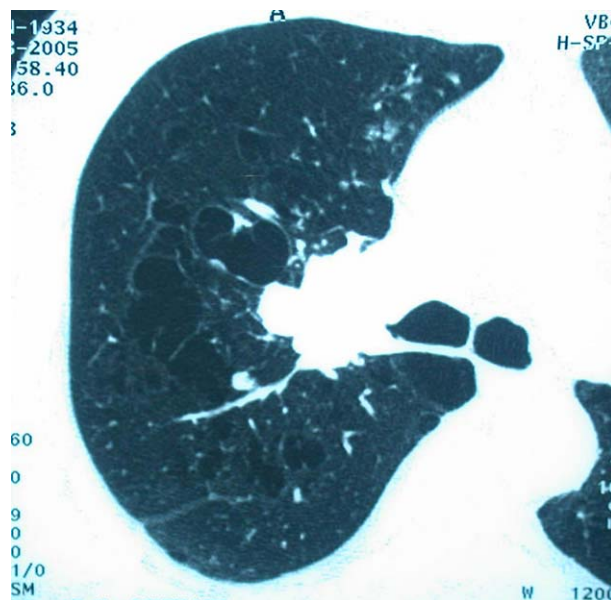


Figure 3 The chest CT revealed a parenchymal lesion, in the right hilar region which was obliterating the main bronchus.

Discussion

Lung cancer has increased in incidence throughout the twentieth century and is now the most common cancer in the world. It is leading cause of cancer mortality in the US with approximately 170000 deaths per year.⁴ It has a poor prognosis, only 10–15% of patients survive 5 years or longer.² Marchesani described four histological subtypes on which the current WHO classification is still based; squamous cell carcinoma, small cell carcinoma, large cell carcinoma and adenocarcinoma.⁵ Cigarette smoking causes all types of lung cancer, but the proportion of cases attributable to smoking is lower for adenocarcinoma than for other types, due to a higher proportion of nonsmokers.⁶ Outcome is dependent on clinical stage and cancer cell type. Lung cancer commonly metastasize to the liver, adrenal glands, bones and kidney. Metastasis to the condyle of the mandible involving TMJ are unusual.

Metastatic malignant tumors involving the TMJ are rare. Metastasis to the TMJ have therefore only been described in the literature in case reports. The largest review, the primary tumor site was the lung in nine cases, the breast in nine cases, the prostate in five cases, and the liver, uterus, colon and pancreas in one case each. In six cases the primary tumor was unknown. There are two references in the review to melanoma, one concerning the nose, the other a toe, and one reference to a metastatic synovial sarcoma of the foot.⁷ The rarity of metastasis to the TMJ can be explained by the isolated nature of its blood supply.⁸ The course of condylar metastases in general is similar to other metastases involving the jaw. Breast cancer as the primary tumor is most frequent, followed by lung cancer.⁹

The clinician should take a potential metastasis into account when dealing with TMJ complaints, radiological oddities, and medical history of malignant tumors. For proper treatment planning, diagnosis should be based on histology. Since the diagnosis of metastasis is usually made at an

advanced stage of disease, therapy will be mainly intended as palliative. In conclusion, mandibular condyle and TMJ metastasis of lung squamous carcinoma is extremely rare but should be considered in the differential diagnosis of TMJ and mandibular lesions.

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