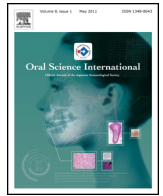




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Case Report

Metastasis of colon adenocarcinoma to the mandible: A case report

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ABSTRACT

Metastatic tumors to the oral cavity are uncommon. In this article, we report a case of metastatic adenocarcinoma of the colon to the mandible with imaging features. A 73-year-old man with a history of colon cancer and liver metastasis was referred to our hospital with a chief complaint of swelling and pain in the right mandible. Panoramic radiograph revealed a radiolucency with ill-defined margin. Computed tomography showed an osteolytic lesion with cortical bone destruction. Magnetic resonance imaging showed a round-shaped homogeneous intensity mass expanding from the mandible. Histopathological diagnosis revealed metastatic adenocarcinoma of the colon.

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1. Introduction

Metastatic tumors to the oral region are uncommon and comprise approximately 1% of all malignant tumors in the oral region [1]. The most common primary sites for oral metastases are the lung, kidney, liver, and prostate for men and breast, genital organs, kidney, and colorectum for women [2].

Colorectal cancers metastasize to the liver and the lungs more frequently than to bone or other organs [3]. Hirshberg et al. [4] reported that 26 out of 390 metastatic jawbone lesions (6.6%) were of colorectal origin. Several studies have reported the clinical, pathological, and radiological features of metastatic colon carcinoma [5–7]. However, published studies have not clearly delineated the imaging features of metastatic colon carcinoma in the mandible on computed tomography (CT) and magnetic resonance imaging (MRI).

In this article, we report a case of metastatic adenocarcinoma of the ascending colon to the mandible with imaging features on CT and MRI.

2. Case report

A 73-year-old man was referred to our hospital with a chief complaint of swelling and pain in the right mandible. In addition, he complained of paresthesia of the right lower lip. The symptoms were noticed about 3 weeks previously. The patient's medical history included ascending colon adenocarcinoma that was treated with surgery 9 months previously. He subsequently developed liver metastasis after surgery and was receiving chemotherapy. His family history was noncontributory. Extraorally, his face appearance was symmetric and the skin was normal. Intraorally, the mandible had two remaining teeth, the left first and second incisors, and the maxilla was edentulous. A firm hemispheric mass, measuring 12 mm in diameter, was found on the buccal side of the right pre-molar region of the mandible. The color of the overlying mucosa was normal. There was no tenderness.

A panoramic radiograph revealed a radiolucency with ill-defined margin in the right mandible (Fig. 1). Axial CT scan showed an osteolytic lesion with the destruction of the buccal cortex in the right mandible (Fig. 2a). On coronal reformatted images, the buccal cortex showed a moth-eaten appearance (Fig. 2b), and sagittal reformatted CT and three-dimensional reconstructed CT revealed that the lesion affected the mandibular canal and mental foramen (Fig. 2c and d). MRI showed the lesion as a round-shaped mass expanding from the mandible, with the destruction of the buccal cortex (Fig. 3). The lesion showed homogeneous and low intensity

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Fig. 1. Panoramic radiograph showing a radiolucency with ill-defined margin in the right mandible.

on T1-weighted images (Fig. 3a) and high intensity on T2-weighted images (Fig. 3b) and short-TI inversion recovery (STIR) images (Fig. 3c). On the basis of these findings, the lesion was thought to be a malignant tumor of the mandible. The possible diagnosis included a primary intraosseous carcinoma or metastatic carcinoma.

An incisional biopsy was performed. Histopathological examination of the biopsy specimen revealed findings consistent with adenocarcinoma, similar to the surgical specimen of the ascending colon (Fig. 4). Consequently, the lesion was diagnosed as metastatic adenocarcinoma of the colon.

3. Discussion

Metastatic tumors in the oral region may occur in the soft tissues or jawbones. Metastases to the jawbones are two times more frequent than those to the oral soft tissues [2]. The breast is the

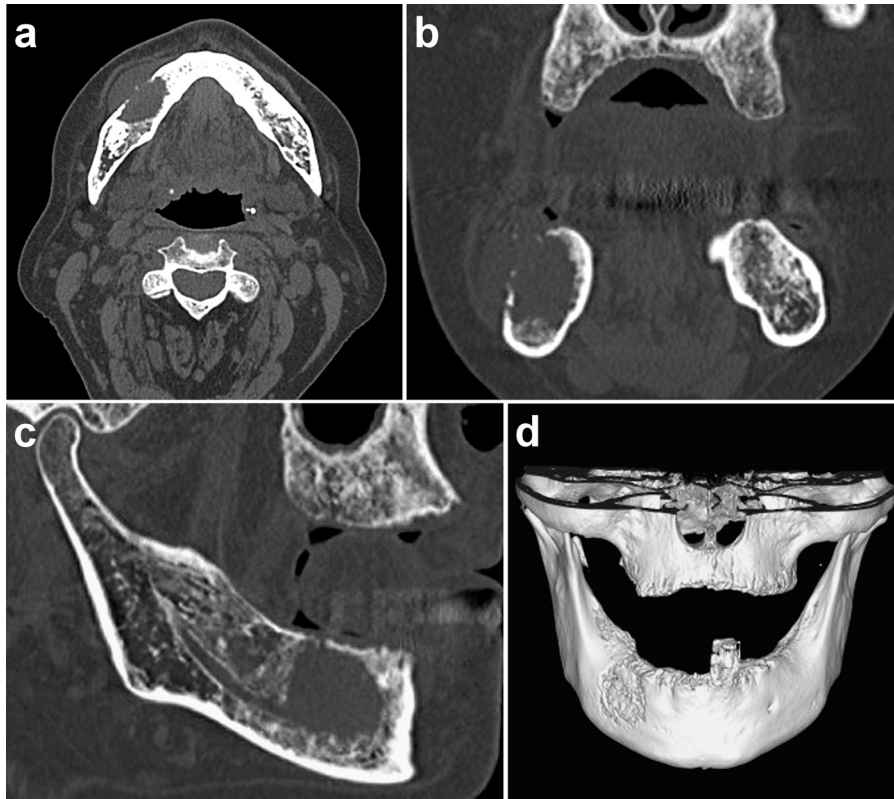


Fig. 2. (a) Axial CT shows an osteolytic lesion with the destruction of buccal cortex in the right mandible. (b) The buccal cortex shows a moth-eaten appearance on a coronal reformatted CT. (c) Sagittal reformatted CT shows the lesion affecting the mandibular canal. (d) Three-dimensional reconstructed CT shows the lesion affecting the mental foramen.

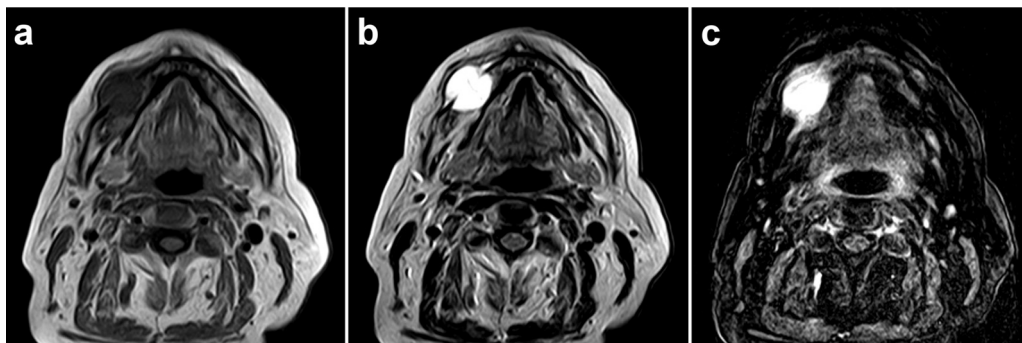


Fig. 3. MRI showing a round-shaped homogeneous intensity mass expanding from the mandible. (a) The lesion shows low intensity on a T1-weighted image. (b) The lesion shows high intensity on a T2-weighted image. (c) The lesion shows high intensity on a STIR image.

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