Yonago Acta medica 2008;51:49–54

A 6-Year Controlled Gastric Adenocarcinoma Metastasized to the Lung, Cervical Spine and Mandible in a Japanese Male: A Patient Report

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Gastric adenocarcinoma metastasized to the lung, cervical vertebrae and mandible 6 years after gastrectomy in a 70-year-old man. When the man visited our clinic, he complained of pain in the left mandible with paralysis in the left lower lip and diffuse swelling with a fluctuation inside the left ramus of the mandible. Medium contrast computed tomography (CT) presented bone loss that looked like a wormhole at the left angle of the mandible. Magnetic resonance imaging (MRI) revealed abscess or osteomyelitis at the site. He showed no response despite treatment with antibiotics, and we suspected a neoplastic lesion. With a mandibular ramus specimen obtained by biopsy and examined histopathologically, adenocarcinoma of the salivary gland was strongly suspected. MRI presented a neoplastic lesion in his cervical vertebrae, and by biopsy he was diagnosed with adenocarcinoma. Thereafter, chest CT presented multiple pulmonary metastases. Considering the patient's history of gastrectomy due to gastric adenocarcinoma, the stomach, cervical vertebrae or mandible were examined pathologically and immunohistochemically by biopsy: all specimens showed a moderately differentiated type of tubular adenocarcinoma, and the results for cytokeratin-related tumor markers were the same. We finally diagnosed him as having metastases from gastric adenocarcinoma to the lung, cervical vertebrae and mandible. Because the metastases had spread to multiple organs, the mandibular lesion was not treated, and terminal care in another facility was unavoidably selected. In making a differential diagnosis of multiple metastases, pathological and immunohistochemical examinations of metastatic lesions by biopsy were very useful based on the diagnostic imagings by CT and MRI.

Key words: controlled gastric adenocarcinoma; cytokeratin; mandible; metastatic tumor

Metastatic tumors in the oral region account for about 1% of all oral carcinomas. The incidence is low, and many patients contract metastatic tumors with no former management of primary sites. We encountered a patient with gastric adenocarcinoma treated by 75% gastrectomy 6 years previously wherein the primary site had long been kept under control. We found cancerous metastases in his lungs and on his cervical vertebrae and mandible. Here we report a brief summary of the case.

Patient Report

A 70-year-old man noticed a pain in the left mandible with paralysis in the left lower lip, and

Abbreviations: CT, computed tomography; MRI, magnetic resonance imaging

visited a nearby dental clinic in December 2004, where his lower left 1st molar was extracted. However, the symptoms did not improve and swelling of the buccal region appeared with an increasing frequency. He visited our clinic at Tottori University Hospital in January 2005. The patient had gastric adenocarcinoma resected 6 years previously. By intraoral examination, we observed discharge of pus from the extraction wound of the lower left 1st molar, and diffuse swelling with fluctuations inside the left ramus of the mandible. Viscous fluid was obtained by puncturing the swelling. A medium contrast computed tomography (CT) scan revealed bone loss resembling a wormhole at the left angle of the mandible (Fig. 1). Magnetic resonance imaging (MRI) showed a high signal with T2 emphasis at the left angle of the mandible, where the internal cortex was partially destroyed. During examination, a T2 high signal appeared multilocularly between the destroyed cortex and inside of the masseter muscle. The signal from the left masseter muscle to the periphery of the lateral pterygoid muscle suggested the spread of inflammation. So, we suspected osteomyelitis or abscess (Fig. 2). Laboratory studies showed normal values except for the amylase level (161 IU/L). We histopathologically examined a biopsy specimen of the mandibular ramus and suspected adenocarcinoma originating from the salivary gland (Fig. 3). At that time, the patient noticed a sharp pain in the cervix, and was referred to the Orthopedic Surgery Clinic of our hospital. There, he underwent MRI, which revealed a neoplastic lesion of the cervical vertebrae (Fig. 4). Through biopsy carried out under CT guidance, we made the diagnosis of adenocarcinoma. Consequently, he was subjected to a complete medical workup: a CT scan showed multiple tubercles and cystic lesions in both pulmonary fields by which we made the diagnosis of lung metastases. Consider-

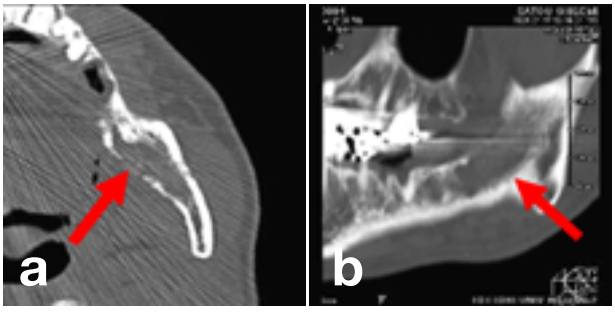

Fig. 1. Bone loss looking like a wormhole is visible at the left angle of the mandible (arrow) by computed tomography with contrast medium. **a:** Transaxial view. **b:** Lateral view.

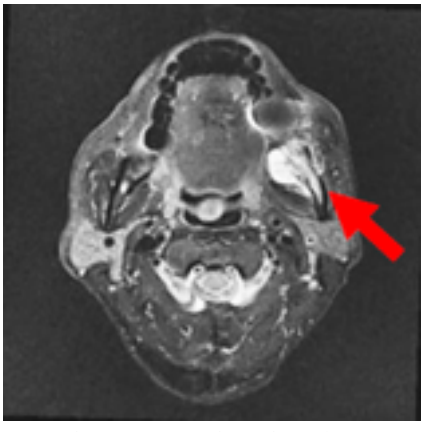

Fig. 2. Magnetic resonance imaging shows partial loss of the cortical bone of the left ramus of the mandible, which shows a high signal destroyed by T2 emphasis. The high T2 signal is multilocularly seen between the destroyed cortex and inside of the left masseter muscle (arrow

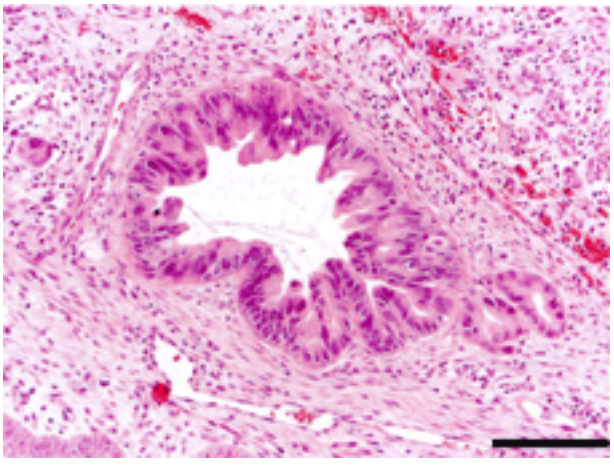

Fig. 3. Glandular atypical epithelium is found in several places with inflammation on the biopsy specimen of the mandibular ramus (hematoxylin and eosin stain). Bar =100 μm.