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Case Report

A rare case of mucous adenocarcinoma with gingival metastasis: A case report and review of literature

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ABSTRACT

Oral cavity metastatic tumors are considered rare and represent approximately 1% of all oral malignancies. Because they are rare and due to atypical clinical and radiographic presentation, metastatic lesions are considered a diagnostic challenge. Primary tumors which metastasize to the oral cavity are most commonly from lung, breast, and kidney and colon. Oral cavity metastases represent distant spread and are associated with poor prognosis. The purpose of this report is to present a rare case of mucous adenocarcinoma of stomach which metastasized to mandibular gingiva.

1. Introduction

Oral region is an uncommon site for metastatic tumor. It accounts for only 1% of all oral malignant neoplasms and most commonly involve the posterior region of mandible [1]. Primary tumors from breast, lung, kidney, bone and colon accounts for 70% of all oral metastatic cases [1], while stomach accounts for only for 2.2% of all cases [8]. Several types of carcinomas arise from the stomach, with adenocarcinoma being the most common and is the second most common cancer worldwide accounting for 3% to 10% of all cancer related deaths [3]. Gastric carcinoma can spread by direct local invasion of adjacent organs, peritoneal spread, lymphatic spread or by haematogenous dissemination [4,5]. Gastric carcinomas metastasize most commonly to liver, lung, and pancreas [4]. The oral cavity is an uncommon site for metastatic spread of gastric adenocarcinoma very few cases are reported in literature and according to Sauerborn D et al. [4] only 18 cases were reported including their case and our search revealed only 2 more such cases [5,6] of which only 10 cases are reported in the mandible (Table 1).

2. Case report

A 60-year-old female patient reported to the hospital with the chief complaint of non-healing socket and painless growth of gums since 1 month (Fig. 1A). Her Medical history revealed that she had gastritis and using proton pump inhibitors for the past 2 years and was anemic. Past dental history reveals an extraction of mobile mandibular right first molar. She was a chronic reverse smoker, quit the habit recently. On intra oral examination a pinkish soft tissue growth surrounding the extracted socket was noted measuring about 2 cm × 1 cm which bleeded on probing and the extracted socket was dry (Fig. 1B). Extraoral examination revealed a painful, fixed right submandibular lymph node. The radiological findings were insignificant to the clinical findings (Fig. 2). Clinical diagnosis was made as pyogenic granuloma and an incisional biopsy of the soft tissue growth was done under local anesthesia. The Hematoxylin and Eosin stained soft tissue section revealed cells with a peripherally located crescent shaped nucleus and intracytoplasmic mucin, the cells are discohesive in the connective tissue with few tubulo ductal areas (Fig. 3A and B). Histochemical stains were performed in an attempt to localize and characterize the tumor cells. Histochemical studies using Periodic acid–Schiff staining revealed the strong positivity in the

☆ AsianAOMS: Asian Association of Oral and Maxillofacial Surgeons; ASOMP: Asian Society of Oral and Maxillofacial Pathology; JSOP: Japanese Society of Oral Pathology; JSOMS: Japanese Society of Oral and Maxillofacial Surgeons; JSOM: Japanese Society of Oral Medicine; JAMI: Japanese Academy of Maxillofacial Implants.

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Table 1

S. no	Sex/age	Site of soft tissue in oral cavity	Author/year
1.	F/63	Mandible	Lund et al. (1968) [4]
2.	M/58	Mandible	Astacio and Alfaro (1969) [4]
3.	M/51	Mandible	Ohba et al. (1974) [4]
4.	F/65	Maxilla	Lopez and Loboz (1976) [4]
5.	M/59	Maxilla	Osaki et al. (1978) [4]
6.	M/65	Soft palate	Arjona et al. (1989) [4]
7.	M/69	Mandible	Tojo et al. (1989) [4]
8.	M/56	Mandible	Hamakawa et al. (1993) [4]
9.	M/66	Maxilla	Florio and Hurd (1995) [4]
10.	M/60	Mandible	Makino et al. (1997) [4]
11.	M/65	Maxilla	Yajima and Miyazaki (1999) [4]
12.	M/65	Tongue	Yasumoto et al. (1999) [4]
13.	M/56	Mandible	Shimoyama et al. (2004) [4]
14.	F/61	Maxilla	Colombo et al. (2005) [4]
15.	M/65	Mandible	Kwon et al. (2006) [4]
16.	F/82	Mandible	Nishide and Kanamura (2006) [4]
17.	M/58	Maxilla	Hwang et al. (2007) [4]
18.	M/70	Mandible	Sauerborn et al. (2011) [4]
19.	M/50	Maxilla	Umashankar et al. (2013) [5]
20.	M/50	Maxilla	Manjunath et al. (2013) [6]
21.	F/60	Mandible	Present case

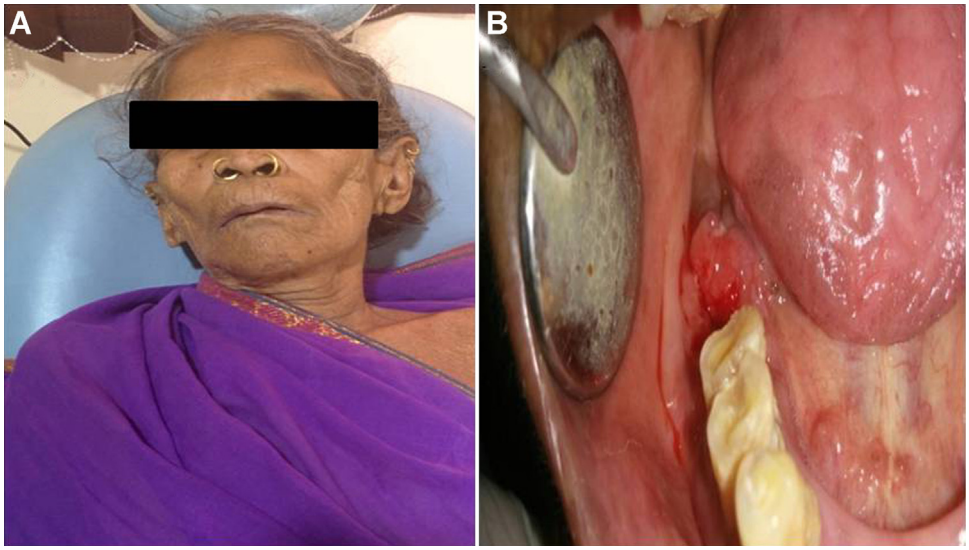

Fig. 1. (A) Extra oral and (B) Intra oral picture of 60 year old female patient.

cytoplasm of tumor cells, which was interpreted as mucin (Fig. 4A). Immunohistochemically tumor cells showed intra cytoplasmic and luminal positivity for MUC1 (Fig. 4B). Based on this a diagnosis of mucous adenocarcinoma was made. The possibility of a metastatic lesion was considered because mucous adenocarcinoma may not develop in the gingiva as the primary site. An immunohistochemical study was done to identify the most probable site of the primary tumor. As the most common metastatic tumors are from breast and lungs immuno profiling was started with Cytokeratins 7 and 20 (CK7/20). The tumor cells are widely immunopostive for CK7. Though the tumor cells were widely positive for CK7, they were negative for Estrogen Receptor (ER), Napsin, TTF1 and focally positive for CK20. The tumor cells are strongly positive for Carcino Embryonic Antigen (CEA) (Fig. 5). Based on the above immunohistochemical studies final diagnosis of mucous adenocarcinoma from stomach was confirmed and the patient was referred to an oncologist for further treatment. Endoscopic examination showed an ulceroproliferative growth of the gastric mucosa and the histological features of the endoscopic biopsy specimen demonstrated the same histological pattern of the metastatic tumor (Fig. 6A and B). Patient was not able to retain in any form solid or liquid diet due to frequent regurgitation even under constant care and supervision. Patient expired due to poor nutrition, before any further investigations could be performed to diagnose metastatic deposits in other organs.

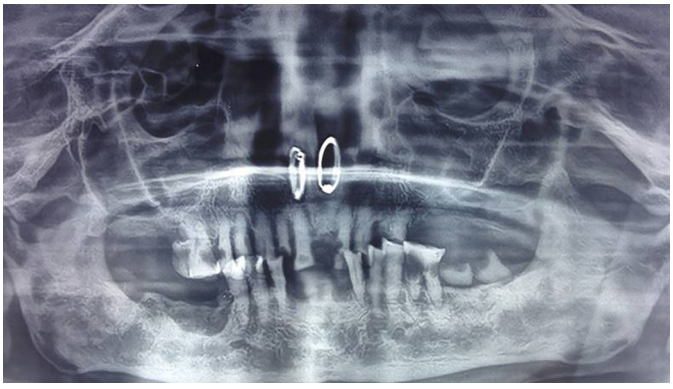

Fig. 2. Orthopantomogram.