Rare Gingival Metastasis by Pancreatic Carcinoma: A Case Report

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Abstract

Metastatic tumors to oral cavity are rare and represent approximately 1% off all cases of oral malignat lesions even though metastatic disease may be present. The 53-year-old female presented in March of 2017 complaining with abdominal pain, weight loss and loose stool not more than 3 times per day. CT scan of the abdomen in July showed retroperitoneal mass expanding along the body of the pancreas. Colonoscopy and gastroscopy with biopsy of mucosa of the stomach showed normal result. The tumor marker Ca 19-9 in July 2018 was 110.3 and in August 2018 350.6. The patient was referred in September of 2018 to the maxillofacial surgery Clinic for examination of the lesion in the oral cavity. She presented with a pain, swelling and occasional bleeding around the lower right molar. Immunohistochemical the tumor cells were positive for Cytokeratin (CK) 19, Cytokeratin (CK) 7, and homebox protein (CDX-2) which is highly sensitive markers of pancreatobiliar cancer. Therefore, the patient was diagnosed with pancreatic carcinoma. This report describes a rare metastasis of malignant pancreatic tumor in lower right gingiva and highlights the importance how immunohistochemical examination helped to identify both the origin and the nature of gingival neoplasm.

Keywords: Pancreatic cancer • Metastasis • Gingiva • Immunohistochemistry

Introduction

Metastatic tumors to oral cavity represent approximately 1% off all cases of oral malignat lesions even though metastatic disease may be present [1] more commonly were affected jawbones than the soft tissues of the oral cavity [2,3]. Prevalence of these tumors in the tongue is reported to be 0.2 % [2]. Patients with pancreatic cancer rarely have symptoms in the early stage, and common symptoms that are present are usually non-specific including shoulder and back pain, dysphagia, dyspepsia, lethargy and changes in bowel habits [4,5]. In accordance with that, patients with pancreatic carcinoma at the initial diagnosis have metastatic disease [5]. Sometimes the intraoral metastasis may be the first sign of and underlying cancer in the body [6]. In this case, biopsy of the metastatic lesion, histology and immunochemistry played an important role in differentiation of the primary tumor. This report describes a rare metastasis of malignant pancreatic tumor in lower right gingiva and highlights the importance of accurate diagnosis and treatment when presenting symptoms and signs are inconclusive.

Case Study

The 53-year-old female presented in March of 2017 complaining with abdominal pain, weight loss and loose stool not more than 3 times per day. Ultrasound of the abdomen in March 2017 showed hyperechoic pancreas with hypodensity of the pancreatic body. Laboratory data showed normal CA-19-9 serum levels at 32.9 (0.0-35.0 U/ml). CT scan of the abdomen showed large calcified retroperitoneal mass medialy to the left adrenal gland. In May 2017 was done explorative laparotomy and biopsy of the mass. The large tumor mass infiltrated abdominal aorte, inferior vena cava, truncus celacius and body of the pancreas. Byopsy confirmed adenocarcinoma, primarily colon. In June, Laboratory data showed increased level of CA-19-9 at 51.8.

Another CT scan of the abdomen in July showed retroperitoneal mass expanding along the body of the pancreas which includes left adrenal gland and truncus celacius. CT of the thorax showed soft tissue mass in right upper lobe of the lungs. Both masses showed increased uptake of the FDG. Colonoscopy and gastroscopy with biopsy of mucosa of the stomach showed normal result. The revision of the biopsy performed in May after laparotomy was done and confirmed immunohistochemically that the primary lesion is either from the colon or pancreas. The patient started treatment with the total of 10 doses of FOLFOX (FOL– Folinic acid F – Fluorouracil OX – Oxaliplatin) chemotherapy regimen and received last dose in May of 2018. In December 2017 after 6. Cycle of FOLFOX therapy PET/CT scan showed expansive mass retroperitonealy left in mild
morphological and metabolic regression but with still active malignant disease. Nodal mass in the upper right lobe of the lungs showed also metabolic and morphological regression. Ct scan done in July 2018 compared with July 2017 showed retroperitoneal mass, in diameter slightly smaller but with infiltration of the body and head of the pancreas. The main pancreatic duct showed 3.7 mm dilatation. The tumor marker Ca 19-9 in July 2018 was 110.3 and in August 2018 350.6. The patient in that time complained with abdominal pain, weight loss, loss of appetite and pain in the right part of the oral cavity. In September 2018 endoscopic ultrasound showed mass within body of the pancreas, enlarged lymph nodes within celiac trunk and hepatoduodenal ligament up to 2 cm.

The patient was referred in September of 2018 to the maxillofacial surgery Clinic for further examination of the lesion and incision biopsy. She presented with a pain, swelling and occasional bleeding around the lower right second molar. Physical examination showed 2 x 1.5 nodule, unclear margin with soft texture and partial mucosal ulceration. There was no bony destruction by radiography. Under local infiltration anesthesia the biopsy of the lesion was done. It was reported as poorly differentiated carcinoma. Immunohistochemical the tumor cells were positive for Cytokeratin (CK) 19, Cytokeratin (CK) 7, and homebox protein (CDX-2) which are highly sensitive markers of pancreatobiliar cancer [Figures 1-5]. Therefore, the patient was diagnosed with pancreatic carcinoma, based on CT scan of the abdomen, endoscopic ultrasound, biopsy of the gingival lesion and histopathological examination and immunohistochemistry. After final diagnosis, patient started chemotherapy treatment with Gemcitabine + Abraxane.

Discussion

This is the first case report of a metastasis of pancreatic adenocarcinoma in gingiva. In this case oral metastasis was not the first indication of pancreatic carcinoma, but histological examination helped to confirm the diagnosis. Metastatic tumors within the oral cavity are very low. Head and neck region is not usually included in the staging scans for abdominal malignancies, and some micro
metastases may go undetected. Therefore, it is still unknown the incidence of metastatic diseases that affects oral cavity. Signs and symptoms which are commonly reported like in our case include pain in the affected area, bleeding, swelling and discomfort [7,8]. Metastatic gingival malignancy presents usually as soft hyperemic nodule with or without pain [9,10].

Pancreatic neoplasm is an aggressive malignancy with 20-30% of cases potentially curable and localized when diagnosed and the 5-year survival rate is approximately only 5 % [11]. Metastases often involve regional lymph nodes instead of distant organs. Hematogenous spreading is usually in liver (64% to 80%), peritoneum (40% to 55%) and lungs (27% to 50%) [12]. Carcinomas that metastasize commonly to the oral cavity include, prostate, breast, kidney, lung, and gastrointestinal malignancies [13,14]. Oral metastasis occurs between the fourth and seventh decades of life usually, where mandible is affected more commonly than the maxilla [13,15]. Pathogenesis of the gingival metastasis is probably associated with oral inflammation that possibly attracts migration and adhesion of the cancer cells to the gingiva [16]. Metastatic disease in the oral cavity from adenocarcinoma of pancreas can cause confusion pathohistologically because of the rarity of such lesions. Therefore, timely biopsy is suggested to exclude a metastatic oral cancer, which can be easily confused with benign reactive lesions or inflammation [9]. Immunohistochemical examination helped to identify both the origin and the nature of gingival neoplasm. Excision of metastasis might help in surviving of the patient, although it is palliative in most cases [17,18]. The diagnosis of a metastasis in the oral cavity poses considerable challenge and the practitioner needs to be careful of the risk of these lesions, while the pathologist has to determine the original tumor based on immunohistochemistry. That helps to determine and increases the chances of successful differential diagnosis. Metastatic lesions should be always included in the differential diagnosis so we can start the treatment sooner.

**Conclusion**

In this case, sadly, the prognosis remains dismal for metastatic disease. With wide spread metastatic disease typical treatment is palliative radiotherapy and chemotherapy, with pain relief and preventing the secondary infections. Management strategies in cases like this should be approached by a multidisciplinary team. Studies in the future should focus on quality of life in these patients, as for now, they are palliative, with mean survival time of 6 - 12 months.

**Conflict of Interest**

The authors declare no conflicts of interest regarding the publication of this report.

**References**


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