

Colorectal Adenocarcinoma Metastasizing to the Oral Mucosa of the Upper Jaw

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SUMMARY

Introduction Metastases to the oral cavity are uncommon, accounting for only 1% of all oral malignant tumors. When they occur they mostly originate from primary tumors of the lungs, kidney, breast and prostate. Oral metastases from the primary colorectal carcinoma are much more infrequent.

Case Outline We present an unusual case of a 78-year-old man with a soft tissue oral metastasis originating from the primary colorectal carcinoma. The patient was referred to the Department of Otorhinolaryngology, Head and Neck Surgery with an intraoral mass on the right side of the maxilla. The diagnosis was confirmed by histopathologic examination and immunohistochemical analysis.

Conclusion Oral metastases occur rarely and often can mimic much more common benign lesions, therefore they should be considered as a possibility in a differential diagnosis.

Keywords: oral metastasis; colorectal cancer; oral cavity

INTRODUCTION

Metastatic tumors in the oral region are rare, accounting for only 1% of all oral malignant tumors [1], while oral soft tissue metastases are even more uncommon accounting for only 0.1% of all oral malignancies [2, 3]. Metastases to the mandible are more common than metastases to the upper jaw. There are also differences between sexes; for women most primary tumors metastasizing to the oral cavity were those of the breast, adrenal and genital organs, for men the most common metastases to the oral cavity were those of the lung, kidney and skin. Colorectal carcinoma with metastases affecting oral cavity are reported, but they occur less frequently, and they are quite uncommon [4]. Metastases of soft tissue in the oral cavity can be similar to other benign lesions such as pyogenic granuloma, giant cell granuloma, fibromas and they can be symptomatic or asymptomatic [5]. In contrast to benign lesions, malignant tumors are characterized by a rapid progression and aggressive growth. Therefore, for the definitive diagnosis, histological verification along with other diagnostic methods is necessary. Our aim is to present a case of colorectal carcinoma metastasizing to the oral mucosa.

CASE REPORT

In February 2013 a 78-year-old male was referred to the Department of Otorhinolaryngol-

ogy, Head and Neck Surgery with an intraoral mass. The patient stated that he noticed a lesion on the alveolar mucosa of the upper jaw 20 days before the referral. The lesion was characterized by a rapid growth, and he started to have difficulties while eating. An inspection of the edentulous oral cavity revealed an intraoral mass on the right side of the upper jaw measuring 3×2 cm. The mass was of soft consistency with a whitish topmost area (Figure 1).

The patient underwent a colonoscopy 18 months earlier, which showed a tumorous formation in the rectum at about 5 cm from the anal verge. Following the colonoscopy, the patient underwent an anterior resection of the rectum-sigma with coloanal termino-terminal anastomosis. Histological finding of the resected material was a well differentiated adenocarcinoma, infiltrating all layers of the rectum and penetrating to the perirectal adipose tissue with an evident vascular invasion. Two lymph nodes were isolated from the adipose tissue and analyzed – they were negative. The staging was pT3 N0, M0, Dukes (B). After discharge from the hospital, the patient was assigned to routine periodical checks. Ten months later on a routine check, abdominal ultrasonography was performed and revealed multiple liver metastases. Values of the carcinoembryonic antigen (CEA) and carbohydrate antigen 19-9 (Ca 19-9) were increased. The patient received palliative care and chemotherapy was discontinued due to the patient's poor general health. Four months later the patient was admitted to the Department of Otorhinolaryngology, Head and

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Figure 1. Intraoral mass on the right side of the upper jaw

Neck Surgery. Upon admission, value of CEA was 112 ng/mL, and of CA 19-9 the value was 1009 U/mL. Considering localization of the tumor and the patient's inability to eat properly it was decided to surgically remove the tumor. After signing the informed consent, the excision was carried out under local anesthesia. Pathohistological finding was adenocarcinoma (Figure 2), which was consistent with the first histological result (Figure 3). Immunohistochemical analysis for the cytokeratins (CK) 7 and 20 were also performed, which proved negative for the CK 7 (Figure 4), and positive for the CK 20 (Figure 5). These findings were consistent with the diagnosis of metastasis of colorectal adenocarcinoma. The patient was discharged a few days later for palliative care at home and died 4 months later.

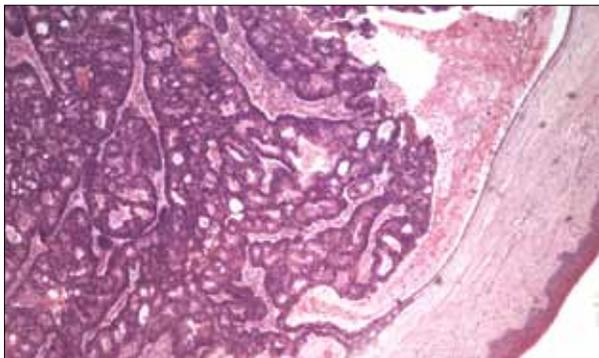


Figure 2. Metastatic adenocarcinoma in the oral mucosa (HE, x40)

DISCUSSION

Among malignant tumors affecting general population, colorectal carcinoma is common, and the most common type of the tumor is adenocarcinoma. Like every malignant tumor, colorectal adenocarcinoma is characterized by local invasion, infiltration and lymphatic and hematogenous dissemination. Common sites of the metastases from the colorectal carcinoma are regional lymph nodes, peritoneum, liver and lungs. Distant metastases are result of the hematogenous dissemination [6] and this is in correlation with the first histological finding of vascular invasion in the perirectal adipose tissue. Hematogenous dissemination can result with an oral metastasis. In our case the patient with disseminated malignant disease and present oral metastasis surprisingly had negative neck and lungs; this fact can be explained by Batson's theory. According to Batson [7], along with the pulmonary, caval, and portal systems of veins, vertebral system of veins is a fourth venous network, and the vertebral veins can also be a route for hematogenous dissemination, thus skipping the neck region and allowing the oral metastasis to occur. When present, oral metastases are similar to the much more common benign lesions. Because of this similarity, histological and immunohistochemical analyses are necessary to provide a definitive diagnosis. Histological criteria for the diagnosis of the metastatic tumor are well known: firstly, the primary tumor must be histologically verified; secondly, the metastatic tumor must be of the same subtype as the primary tumor; finally, a possibility of direct expansion from the primary tumor must be excluded [8]. Immunohistochemistry for

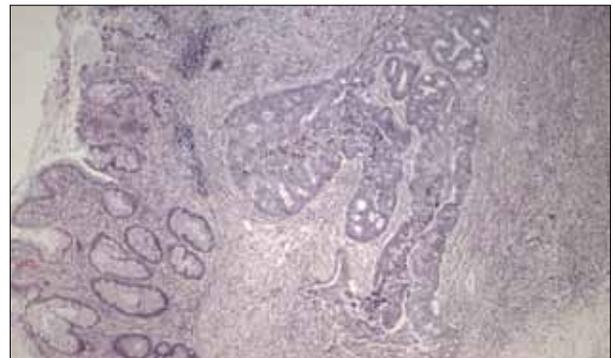


Figure 3. Primary colorectal adenocarcinoma (HE, x40)



Figure 4. Immunohistochemical stains in the metastatic tumor show negativity for the keratin 7 (HE, x400)

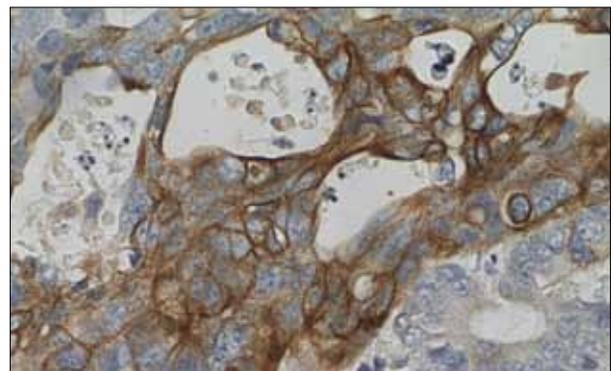


Figure 5. Immunohistochemical stains in the metastatic tumor show prominent positivity for the keratin 20 (HE, x400)

colorectal adenocarcinoma commonly shows negative immunostaining for the CK 7 and positive for the CK 20 and CEA [9]. Our findings were consistent with the histological criteria and the results of immunohistochemistry also confirmed metastatic colorectal carcinoma. Oral metastases are commonly a result of the disseminated malignant disease with poor prognosis [10]. When they occur, oral metastases frequently interfere with feeding and mastication and surgical removal as a palliative procedure is recommended

[11]. There are other recommended procedures in cases of the disseminated malignant disease, mainly with the palliative purpose; those are radiation, chemotherapy or a combination of these [12].

It can be concluded that oral metastases originating from colorectal adenocarcinoma are rare, therefore it is important to bear in mind this possibility when encountering much more common benign lesions, and such condition should be considered in a differential diagnosis.

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Колоректални аденокарцином који је метастазирао у оралну мукозу горње вилице

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КРАТАК САДРЖАЈ

Увод Метастазе у усну шупљину су ретке и обухватају само 1% свих оралних малигних тумора. У случају појављивања, најчешће настају од примарних тумора плућа, бубрега, дојке и простате. Оралне метастазе од примарног колоректалног карцинома много су ређе.

Приказ случаја Приказујемо необичан случај 78-годишњег мушкарца с мекоткивном оралном метастазом насталом из примарног колоректалног карцинома. Болесник је упућен

на одељење за болести ува, грла, носа и хирургију главе и врата с интраоралном творевином на десној страни горње вилице. Дијагноза је потврђена патохистолошким прегледом и имунохистохемијском анализом.

Закључак Оралне метастазе се ретко појављују и често могу опонашати пуно чешће бенигне лезије. Због тога се морају размотрити као могућност у диференцијалној дијагнози.

Кључне речи: орална метастаза; колоректални карцином; усна шупљина

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