



# A Case of Pancreas Adenocarcinoma Presented with Palatine Tonsil Metastasis

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## Abstract

**Introduction:** Palatine Tonsil (PT) is very rich in its vascularization despite the tumor metastasis to this region is rare. Although metastasis from various organs to PT has been reported, the metastasis of pancreatic malignancies to PT is very rare.

**Case Report:** We present a 70-year-old woman with histopathological diagnosis of adenocarcinoma of the pancreas of its metastasis leading to ulcerovegetan appearance in the right PT.

**Conclusion/Discussion:** Early diagnosis and treatment planning is important because of the poor prognosis of metastatic PT malignancies. In this regard, it was aimed to increase the awareness of the reader with an extremely rare clinicopathologic case.

**Keywords:** Palatine tonsil; Adenocarcinoma; Pancreatic neoplasms; Metastasis

## Introduction

While lymphoma and squamous cell carcinoma are the most common primary malignancies of Palatine Tonsil (PT), metastatic malignancies are rarely seen with 0.8% of all PT tumors [1]. Lung, esophagus, stomach, colon, rectum, breast, kidneys and malignant melanoma have been reported in the literature as the metastases to PT [2-8]. However, there are two cases reported in the English literature up to now with the metastasis of pancreas Adenocarcinoma (AC) to PT [9,10]. Herein, we report our very rare case of pancreas adenocarcinoma who presented with palatine tonsil metastasis in the light of the literature.

## Case Presentation

A 70-year-old woman with complaints of neck swelling and swallowing difficulty on her right side for 20 days was admitted to our ENT clinic. In her medical history, she had a surgery in 2013 due to adenocarcinoma of pancreas (ampulla of Vateri). On oral and flexible fiberoptic nasopharyngolaryngoscopic examination, an ulcero-vegetan mass of 3 cm × 2 cm in size was observed on right palatine tonsil. This mass was invading to the anterior tonsillar but not invading to posterior tonsillar pillar and base of the tongue. Tonsillar mass was extending to the vallecula epiglottica. She had a 3 cm × 2.5 cm size of firm and partially fixed lymphadenopathy in the jugulodigastric region on the same side of the neck. There was no significant finding on family history and her routine biochemical tests were unremarkable. Neck Computed Tomography (CT) and Magnetic Resonance Imaging (MRI); a 25 mm × 15 mm mass which is thought to be compatible with PT carcinoma which obliterates the air column in right-sided PT area and metastatic lymphadenopathies in the jugulodigastric region with a diameter of 27 were observed along the cervical chains (Figure 1a and 1b). After informed consent of the patient, tonsillectomy was performed by radiofrequency method under general anesthesia. In histopathological examination; according to immunohistochemical and morphological findings, it was reported as compatible with PT metastasis of AC of the pancreas origin (Figure 2a-2c). The patient is followed-up for 10 months with the medical oncology clinic without any disease.

## Discussion

PT has a rich in vasculature organ but metastatic tumour involving the PT is distinctly rare [1]. According to a large scale study, only 12 tumors (0.8%) were due to metastasis in a series of

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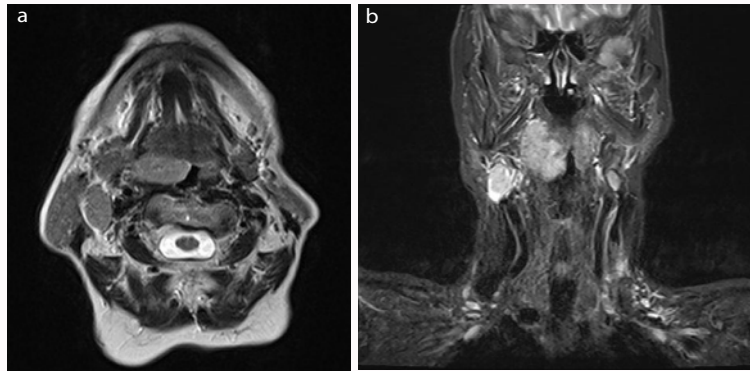
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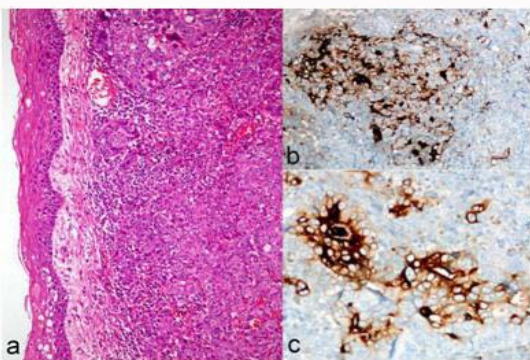
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**Figure 1a and 1b:** Computed Tomography and Magnetic Resonance Imaging of the neck in the coronal section revealed intraluminal protruding mass in the right PT area and metastatic lymphadenopathies in the jugulodigastric region with heterogeneous enhancement, suggesting malignancy of palatine tonsil.



**Figure 2:** a. Malignant tissue consisting of nucleus, prominent nucleolus cells with coarse chromatin, showing prominent pleomorphism and atypia under surface squamous epithelium(H&E, x100), b. Positivity in malignancy cells in immunohistochemical staining with B72.3 (x200), c. Positivity in malignancy cells in immunohistochemical staining with CEA (x200).

1547 tonsillar tumors [11]. The malignancies that metastasize to PT are melanoma, hypernephroma, breast cancer and bronchial cancer in order of frequency [2]. Although metastases of rectum, colon, esophagus and stomach cancers have been reported, the number of cases with these metastases is less than 100 in the literature [7]. On the other hand, regardless of the type of malignancy, the majority of cases are a sign of systemic invasion if PT is metastatic, and the average survives can be as short as 9 months. Although metastases have been reported in both PTs, especially in colon ACs, metastases to the left PT was reported to be 2 times more than right PT [7]. Maor et al. [10] reported the metastasis of primary pancreas AC in both PTs in a 59-year-old female patient. However, in our case, only right PT metastasis was associated with AC. It is difficult to determine whether PT malignancies are primary or metastatic, especially in cancer patients with complete remission. Immunohistochemically in the differential diagnosis of AC metastasis, the pancreas was considered as the primary site of this PT metastasis, because B72-3, CEA monoclonal, CK7, MUC5AC antibodies were positive, CDX2 and NAPSIN-A were negative, and the patient's previous pancreas AC histopathology was considered. We can think of various pathways of AC malignancies such as gastrointestinal derived colon, stomach and rectum, despite uncertain. These invasion pathways for the AC of these gastrointestinal organs can be put it forward to the pancreas AC. In our case there are some hypothetical pathways for metastatic spread to the tonsils: Hematogenous dissemination from a pancreas adenocarcinoma may occur via the portal circulation, the liver, the

pulmonary circulation and systemic arterial vessels, thus reaching the palatine tonsil. A second hematogenous route may be through the paravertebral plexus of Batson, bypassing the lungs [12]. Retrograde flow via this valve less plexus occurs during elevated intraabdominal and intrathoracic pressure, as is brought about by straining, coughing or vomiting. A third route of metastasis may be through the thoracic duct followed by retrograde cervical lymphatic spread to the tonsil. Finally, malignancy cells with vomiting or endoscopic procedures may have retrograde access to the surface of the damaged PT with regurgitation. In all of the aforementioned possible pathologies, it is thought that the metastasis of pancreatic AC to the PT is the most prone to hematogenic spread [3,7,12].

In conclusion, when we encounter a unilateral vegetative or ulcerovegetan mass in PT, we think that it may be primary squamous cell carcinoma or lymphoma of PT. but rarely, we think that malignancy in other organs may be metastasis, and we should question the distant organ malignancies in the patient's history.

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