

Discovery of a Small Primary Tumor on the Appendix Tip in a Patient with Liver Neuroendocrine Metastases via Ga-68 DOTA-TATE PET/CT Images

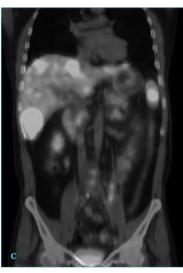
LETTER TO THE EDITOR

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Carcinoid tumors of the appendix most commonly occur between the 3rd and 4th decades. Clinically, these can present as acute appendicitis, but sometimes, the patients may not present with pain if the tumor is at the appendix tip as it may not cause luminal obstruction. Patients with a tumor diameter of <1–2 cm have a very low risk for widespread disease (1, 2). The most significant adverse prognostic factor is the presence of liver metastases (3, 4). Experience related to advanced disease is lacking because of the rare occurrence of these tumors. In metastatic appendiceal tumors, instead of only appendectomy, more aggressive surgeries such as right hemicolectomy are recommended (3, 5). Although Ga-68 DOTA-TATE PET/CT has a significant clinical impact in the management of patients with NET, till date, no case report has been presented related to the imaging features and somatostatin receptor expression status in an appendiceal carcinoid as small as 10 mm. Consequently, this case shows us that a small appendecial tumor can have an aggressive nature regardless of the tumor size and careful examination should be performed to reveal the primary focus (Figure 1a-c).







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©Copyright 2016 by Erciyes University School of Medicine - Available online at www.erciyesmedj.com Figure 1. A 47-year-old man presented with multiple hypodense lesions in liver consistent with metastases on computerized tomography (CT). Fine-needle aspiration cytology of the liver was performed, and neuroendocrine carcinoma metastases were observed. Ultrasonography, colonoscopy, and thoracoabdominal CT failed to demonstrate primary tumor. The patient was referred for Ga-68 somatostatin analog imaging to demonstrate the primary tumor and stage the disease. Ga-68 dodecanetetraacetic acid tyrosine-3-octreotate (DOTA-TATE) positron emission tomography/CT (PET/CT) (A: MIP image; B: coronal CT image; C: coronal fusion image) revealed intense somatostatin receptors expressing multiple metastatic lesions in the liver. In addition, a small tumor measuring approximately 10 mm was found at the appendix tip (arrows), with the regional pericolic mesenteric lymph node showing high-grade uptake. Because of the advanced disease, the patient was subjected to a right hemicholectomy procedure with lymph node dissection. In the pathological examination, the appendiceal lesion was interpreted as a carcinoid tumor. A few tumor cells were present in the mesoappendix, and metastatic involvement was identified in one of the regional lymph nodes. Immunohistochemical analysis of the specimen revealed a neuroendocrine tumor with positive staining of synaptophysin and chromogranin. It was a low-grade neoplasia in terms of the mitotic count, and the Ki-67 index was 1%-2%.

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