

Positron Emission Tomography/Computed Tomography Alert Finding in an Esophageal Cancer Patient

Abstract

Emergency pathologies often accompany malignancies. We herein report a case of pulmonary abscess in a patient with esophageal cancer which was depicted during the F-18-fluorodeoxyglucose positron emission tomography/computed tomography (PET/CT) staging study. The patient's history of recent dilatation of the cancer stenosis in adjunct to the previous CT lung imaging, which was normal, made evident the diagnosis of the pulmonary abscess due to the perforation of the esophageal neoplasm. This life-threatening condition was promptly referred and successfully managed.

Keywords: Esophageal cancer, F-18-fluorodeoxyglucose positron emission tomography/computed tomography, pulmonary abscess

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A 55-year-old male with a recent diagnosis of adenocarcinoma of the lower third of the esophagus underwent F-18-fluorodeoxyglucose positron emission tomography/computed tomography (F-18 FDG PET/CT), which showed a large, thick-walled, cavitory lesion in the right lower lobe with intense FDG uptake (maximum Standardized Uptake Value [SUVmax] = 12.2), abutting the esophageal neoplasm (SUVmax = 5.5) [Figure 1]. The lung lesion was new compared to the CT study performed a month earlier, while in the meanwhile, the patient underwent endoscopic biopsy and dilatation to relieve from dysphagia. The patient, who was alcoholic, presented with a complaint of recent-onset intermittent coughing, especially

when lying, but he denied fever or chills. No clear fistula formation was evident in the low-dose unenhanced CT part of the study. Taking together the imaging findings and clinical history, a diagnosis of lung abscess was made, presumably due to perforation induced by the mechanical dilatation of the cancer stenosis and spontaneous esophagopulmonary fistula formation. The patient was promptly referred to the oncology department and was started on antibiotic therapy. A follow-up CT performed 20 days later showed resolution of the lung abscess [Figure 2]. This is a rare and life-threatening condition, which radiologists and nuclear medicine physicians should recognize and refer the patient for urgent management. Only a few similar cases have been published so far,^[1-8] highlighting the importance of F-18 FDG PET/CT in detecting this life-threatening condition.

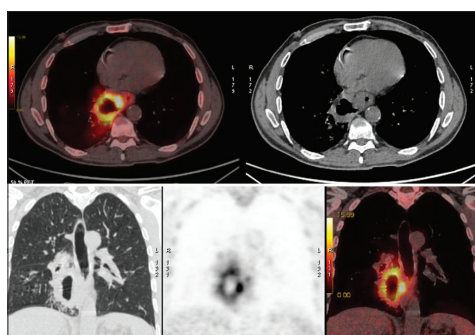


Figure 1: F-18-fluorodeoxyglucose positron emission tomography/computed tomography, axial and coronal slices

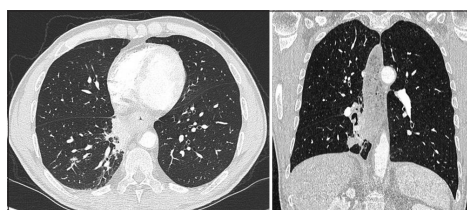


Figure 2: Computed tomography thorax postantibiotic therapy, axial and coronal slices

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Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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