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Candida esophagitis mimicking esophageal malignancy on 18FDG PET/CT

To the Editor,

Fluorine-18 fluorodeoxyglucose (^{18}FDG) positron emission tomography-computed tomography (PET/CT) has been widely used in detecting malignancy. However, benign conditions, including infections and inflammatory lesions, may also show 18FDG accumulation (1). Although candida esophagitis is the most common cause of esophagitis in immunocompromised patients (2), it can also occur in patients with no predisposing risk factors (3), in whom it is more likely to be asymptomatic.

A 45-year-old man with lung cancer visited our department for ^{18}FDG PET/CT, in order to evaluate treatment response to radiotherapy. Written informed consent was obtained from the patient. Response to radiotherapy was evident in PET/CT images. However, significant hypermetabolism was seen along a 6-cm segment at the middle third of the esophagus (Figure 1), as well as wall thickening (WT). Esophageal WT is a nonspecific response to various conditions, including esophagitis. Differential diagnoses included benign and malignant tumors of the esophagus, as well as various other conditions such as Barrett esophagus, secondary achalasia, diffuse esophageal spasms, varices, and esophageal intramural pseudo diverticulosis, as well as esophagitis (4).

In this case, radiation esophagitis was suspected owing to the presence of concentric and circumferential WT. Although WT of the esophagus is not in uncommon in esophagitis, Berkovich et al reported the mean WT in patients with esophagitis to be 7 mm (4); in cases with thickening of >10 mm, a malignant process is considered more likely (5).

In our patient, the WT was 11 mm, and the proximal two-thirds of the esophagus, rather than the middle third, had been exposed to radiation. Additionally, reflux esophagitis was excluded, because the whole esophagus and particularly, the distal esophagus would be expected to be involved (6). The findings were similar to those of malignant lesions with a high metabolic rate, which led us to suspect a malignant esophageal lesion. Therefore, despite the first impression suggesting radiation esophagitis, we undertook a histopathological examination that revealed candida esophagitis. The patient did not have any symptoms, clinical features, or laboratory results indicative of immune deficiency.

In conclusion, candida esophagitis may present as circumferential esophageal WT on CT, mimicking esophageal malignancy. Furthermore, avidity of 18FDG has been well determined in various inflammatory processes, including reflux (6) and radiation (7) esophagitis.

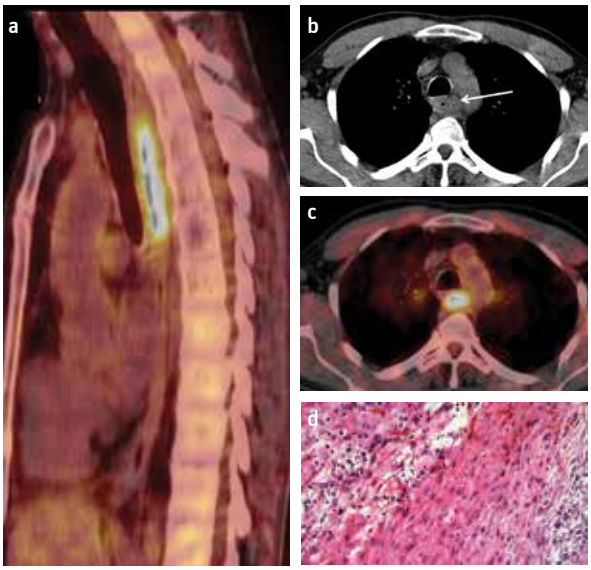

Figure 1. a-d. Sagittal CT images show 18FDG uptake along the middle third of the esophagus **(a)** with wall thickening **(b)** of up to 11 mm (arrow). Fusion images show significant 18FDG uptake (SUVmax=8.5) **(c)**. Histopathological examination illustrates a mixture of budding yeast and pseudohyphae, typical of candida species, infiltrating the squamous epithelium **(d)**.

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