

Tumor Thrombi in Multiple Tributaries of the Mesenteric Vein in a Case of Carcinoma Rectosigmoid: A Rare Entity

Abstract

Treatment for tumor thrombus in multiple blood vessels can be a challenge for management and thus FDG PET CT is a potent tool in evaluation of such cases in differentiating between bland and tumor thrombus and commenting on the extent of the involvement.

Keywords: *Carcinoma rectosigmoid, fluorodeoxyglucose positron emission tomography-computed tomography, hypermetabolic, mesenteric veins, tumor thrombi*

A 67-year-old female patient with biopsy-proven carcinoma colon underwent contrast-enhanced computed tomography (CT) scan (contrast-enhanced CT) of the abdomen which showed, diffuse circumferential enhancing wall thickening of the sigmoid colon and proximal rectum associated with the inferior mesenteric vein thrombosis.

Fluorodeoxyglucose positron emission tomography CT (FDG-PET CT) done for staging workup revealed metabolically active lesion in sigmoid colon and proximal rectum (site of primary lesion, maximum standardized uptake value-22.33) with FDG avid mesenteric and pericolic lymph nodes. Diffusely increased FDG uptake was seen in multiple mesenteric veins and its network along the involved segment of colon [Figure 1].

Tumor extension into a vessel is called intravascular tumor thrombus and is a relatively rare complication of solid tumor. Malignancies showing more frequent incidence of tumor thrombus are renal cell carcinoma, Wilms tumor, adrenal cortical carcinoma and hepatocellular carcinoma with few sporadic cases reported for the diagnosis of tumor thrombosis by PET/CT. Its presence changes the stage, treatment, and prognosis. Venous tumor thrombus is a rare finding in colorectal cancer, seen only in only 1%–2% of cases. Due to dual venous drainage through the portal and internal iliac systems, tumor thrombus

from rectal cancer can involve either the inferior mesenteric vein or the internal iliac veins.^[1,2]

As per the currently available literature, the most common site of tumor thrombus reported is inferior vena cava. The involvement of multiple mesenteric veins by tumor thrombus is not reported to the best of our knowledge.^[3]

Identifying tumor thrombus is a challenging task though it is crucial for management. Multi-modality imaging using ultrasound, color Doppler, computed tomography, magnetic resonance imaging, and FDG-PET CT plays an important role in this situation.

Differentiating between bland and tumor thrombus is of utmost importance while evaluating a patient for staging of cancer or if incidental detection of thrombus is there. The conventional modalities have few nonspecific criteria to clinch the differentiation; however, FDG PET CT plays an integral role in to provide anatomical extent and metabolic details, thus confidently differentiate between bland and tumor thrombus.^[4]

Treatment options available for tumor thrombus are surgery, chemotherapy, interventional radiology, and anti-angiogenic agents. Medical management is the option for bland thrombus.^[5,6]

However, treatment for thrombus in multiple blood vessels can be a challenge for management, and thus FDG PET

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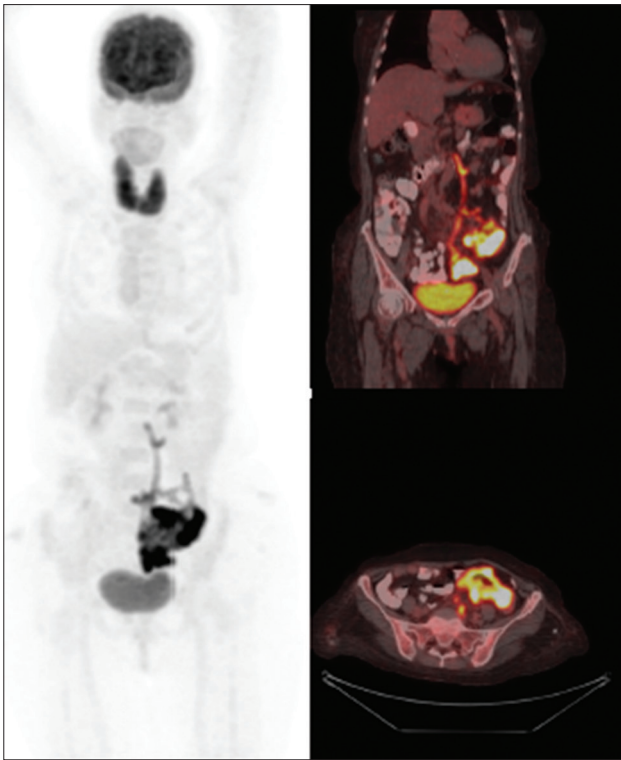


Figure 1: MIP image in coronal section, fused PET CT image in Coronal and axial section shows increased FDG uptake in the recto-sigmoid tumor and mesenteric vessels with tributaries like a network emanating from the tumor. Incidental detection of thyromegaly with diffusely increased FDG uptake is consistent with clinical thyroiditis

CT is a potent tool in the evaluation of such cases in differentiating between bland and tumor thrombus and commenting on the extent of the involvement.

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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