Incidental Finding of Lipomatous Hypertrophy of the Interatrial Septum during 18F-Fluorodeoxyglucose Positron Emission Tomography–Computed Tomography for Cervical Cancer

Abstract

Lipomatous hypertrophy of the interatrial septum is a benign but less recognized pathology of the heart caused by benign fatty infiltration of the interatrial septum which most often spares the fossa ovalis. We share images of the incidentally detected fluorodeoxyglucose (FDG) uptake in the interatrial septum during the restaging of 18F-FDG positron emission tomography/computed tomography scan of cervical cancer.

Keywords: *18F-fluorodeoxyglucose, interatrial septum, lipomatous hypertrophy, positron emission tomography–computed tomography*

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The term lipomatous hypertrophy of the interatrial septum (LHIS) is actually a misnomer and is basically proliferation unencapsulated mature fat cell infiltrating the myocardial fibers of the interatrial septum. Therefore, it is neither hypertrophy of the fat cells nor a lipoma.[1] The incidence of LHIS detected on multislice computed tomography (CT) is reported to be 2.2%, whereas the incidence of LHIS detected through echocardiogram and autopsy has been reported between 1% and 8%.[2,3] We share images of incidentally detected fluorodeoxyglucose (FDG) uptake in the interatrial septum during restaging 18F-FDG positron emission tomography (PET)-CT scan of cervical cancer.

A 70-year-old hypertensive and diabetic woman was diagnosed with differentiated squamous cell carcinoma of the cervix in 2008. She had total abdominal hysterectomy with bilateral salphingo-oophorectomy followed by chemotherapy and local radiotherapy in 2009. She was apparently well until she was noted to have a solitary apicoposterior lung nodule measuring 8 mm on surveillance CT in late 2016. 18F-FDG PET-CT scan in February 2017 was performed 60-min postinjection of 370 megabecquerel (10 mCi) of 18F-FDG [Figure 1]. Although there is no definite value, most of the studies consider 20 mm as the defining thickness.[4,5] Thus, this case may reflect an early stage of the disease. The etiology of LHIS is unknown, but the presence of fetal brown fat amid the matured fat cells contributes to the FDG uptake frequently seen in this condition.[5] This condition occurs predominantly in the elderly, obese female and with metabolic disorders.[4] The importance of this benign and less often recognized pathology is that there is increased incidence of atrial arrhythmias and sudden cardiac death. Fortunately, this woman did not have any cardiac arrhythmias to date and is currently also being monitored by cardiologists. Recognizing LHIS is important to avoid misdiagnosis of cardiac metastases which may lead to unnecessary cardiac surgery or given suboptimal treatment.[5,6]

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

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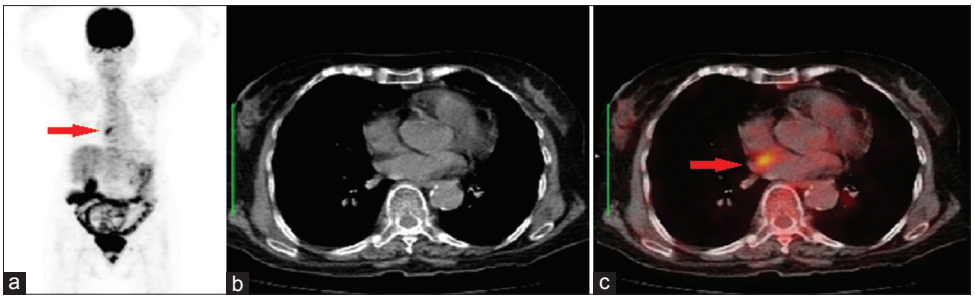

Figure 1: There was increased FDG uptake seen in the interatrial septum with standardized uptake value of 3.5 (a and c). The hypodense interatrial septum measures 6 mm on the corresponding CT images (b). There was neither FDG-avid local recurrence nor evidence of metastases seen elsewhere in the scan. The left apicoposterior lung nodule was not metabolically active

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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