Letter to the Editor

F-18 FDG PET/CT in restaging of a rare case of malignant cystosarcoma phylloides

Sir,

Phylloides tumor of breast is a very uncommon neoplasm that occurs exclusively in female breast.[] Though being the most common non-epithelial tumor, it accounts only up to 1% of all the breast tumors.[] An early detection of recurrence and appropriate restaging of recurrent tumor is very important for therapy and prognostication, as the surgery remains the only method of cure and tumor control as there is no definitely proven benefit of any chemotherapy in malignant phylloides tumors.[] Here, we report a case of malignant phylloides tumor of the breast where FDG PET/CT was used for restaging.

A 35-year-old female previously diagnosed with malignant cystosarcoma phylloides tumor, treated with simple mastectomy and histopathology, revealed predominance of epithelial components in the tumor along with foci of sarcomatoid differentiation. Three months after surgery, she presented with recurrent mass. She was treated with chemotherapy with vincristine, doxorubicin, endoxan, and dexamethasone. After 2 cycles of chemotherapy, patient noticed increase in the size of the mass indicating the failure of chemotherapy regimen. She was subjected to FDG PET/CT for restaging the disease. FDG PET/CT study revealed intense FDG uptake (SUVmax = 15.7) in periphery of soft tissue mass of size 5.0 × 4.0 cm in left side of chest wall with central photopenia corresponding to hypodensity in CT images suggesting central necrosis (Figure 1a and b). Mass was also seen to invade the pectoral muscles with FDG uptake extending into the pectoral muscles. No abnormal axillary or internal mammary lymph nodal uptake was noted. There was no gross lymphadenopathy in CT images too. Whole body examination revealed a 1.5 cm pleural-based lung nodule in lower lobe of left lung with faint FDG uptake (SUVmax = 2.7), suspicious for metastatic lesion. Later, the patient was subjected to palliative excision of tumor. Histopathology of the excised tumor and pectoral muscle confirmed residual cystosarcoma phylloides tumor with malignant histology along with pectoral muscle invasion. When compared to initial surgical specimen, there was overgrowth of stromal elements at the time of recurrence, and immunohistochemistry was positive for CD34, vimentin, and for cytokeratin focally. After surgery, patient was put on monthly follow-up; however, patient was lost to follow-up, and after 5 months, she presented with multiple lung metastases with increase in size of the pleural nodule noted in PET/CT study along with malignant left pleural effusion confirming the residual metastatic disease in left lung as suggested by FDG PET/CT examination (Figure 1c).

Restaging of malignant tumors after chemotherapy includes assessment of local residual disease and search for distant metastases. FDG PET/CT being a sensitive, functional and whole body investigation can be useful as a one-stop shop imaging for assessment of local residual disease and search for distant metastases. Also, FDG PET/CT has been found useful in detecting viable tumor and restaging wide of variety of malignant tumors. However, the literature search revealed only two case reports, out of which one described intense FDG uptake in malignant phylloides tumor at the time of initial staging.[] Findings in our case also show that malignant phylloides tumor is intensely FDG avid. In addition, FDG PET/CT was able to identify residual disease in the primary site and in left lung accurately, aiding in accurate restaging of disease. FDG PET/CT, therefore, can be useful to detect residual/recurrent disease during follow-up of these uncommon tumors.

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References


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Figure 1: F-18 FDG PET/CT images (a) MIP showing intense FDG uptake in a mass in left side of chest wall, (b) Trans-axial showing intense FDG uptake in the periphery of a soft tissue mass with central photopenia in left breast, and (c) faintly FDG avid pleural-based lung metastasis (SUVmax = 2.7) in lower lobe of left lung.

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