

Extensive Extranodal Cutaneous Lymphomatous Involvement in a Case of Adult T-Cell Lymphoma – Advantage of 18F Fluorodeoxyglucose Positron-emission Tomography–Computed Tomography over Computed Tomography

Abstract

Diffuse extranodal cutaneous lymphomatous involvement is a unique presentation in a case of adult T-cell lymphoma. We present the case of a 26-year-old female who presented with erythematous rashes with subsequent evaluation with 18F fluorodeoxyglucose positron-emission tomography–computed tomography showing enlarged inguinal and axillary lymph nodes, and biopsy findings from the inguinal lymph nodes were suggestive of adult T-cell lymphoma.

Keywords: *Cutaneous, fluorodeoxyglucose, lymphoma, positron-emission tomography–computed tomography, T-cell*

A 26-year-old female presented with chief complaints of erythematous rashes of the skin for 6 months to the dermatology outpatient department. On suspicion of any underlying malignancy or inflammation, 18F fluorodeoxyglucose positron-emission tomography–computed tomography (¹⁸F FDG PET-CT) was advised by the dermatologist. Scan findings revealed enlarged bilateral axillary [Figure 1a-d], iliac, and inguiofemoral [Figure 1a and e-g] group of lymph nodes, largest in the right inguinal region measuring approximately 2.0 cm × 1.8 cm along with hepatosplenomegaly with increased FDG uptake in the spleen than the liver. Diffuse increased FDG uptake was seen in the entire overlying skin more prominent in the region of skin folds such as the pinna, chin, shoulder, buttocks, and perineum [Figure 1a-j]. Histopathology features from the right inguinal lymph nodes and skin were suggestive of adult T-cell lymphoma. Adult T-cell leukemia/lymphoma is a peripheral T-cell lymphoma associated with human T-cell lymphotropic virus type 1 infection and is associated with a poorer prognosis compared to B-cell lymphomas.^[1,2] Skin is the most common site of extranodal

organ involvement for T-cell lymphomas.^[3,4] The cutaneous lesions appear macroscopically as papules, ulcers, nodules, or a combination of the three. Nonspecific cutaneous lesions occur in 13%–40% of patients which include pigmentation, pruritus, and exfoliative dermatitis.^[5] These groups of neoplasms are known to show high FDG avidity, and the advantage of ¹⁸F FDG PET-CT over CT in the detection of extranodal involvement has been previously elucidated in the literature.^[2,6,7] The authors through this case want to bring to the fore diffuse and uniform cutaneous involvement in an adult T-cell lymphoma and underscore the importance of ¹⁸F FDG PET-CT in the early detection of this extranodal feature in addition to the nodal disease where there is no discernible skin changes such as papules, nodules, or ulcers clinically or on conventional morphologic imaging.

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

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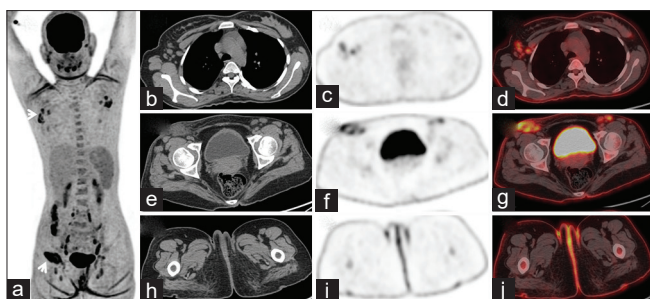


Figure 1: (a) Maximum intensity projection image of fluorodeoxyglucose positron-emission tomography-computed tomography showing focal increased radiotracer uptake in the bilateral axillary region (white arrow) and pelvic region (white arrow) conforming to lymph nodes on axial computed tomography (b and e) showing increased fluorodeoxyglucose uptake in positron-emission tomography only (c and e) and fused positron-emission tomography-computed tomography image (d and g), respectively. (h) Axial computed tomography section of the upper thigh region with no discernible skin changes but increased fluorodeoxyglucose uptake in the overlying skin and perineum (i) and fused positron-emission tomography-computed tomography image was suggestive of cutaneous tumor infiltration (j)

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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