

## The impact of 18F-FDG-PET-CT findings in the management of a patient with *Mycosis Fungoides*

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### ► Case report

### ABSTRACT

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In this case we report the detection of lymph node metastases in a 52 years old patient with mycosis fungoides utilising 18F- FDG-PET/CT which led to a change in the management of the patient.

**Keywords:** 18F-FDG-PET/CT, mycosis fungoides, non-hodgkin lymphoma.

### CASE PRESENTATION

A 52 year old man with a known MF and skin patches in both legs for 5 years and a past history of ultraviolet irradiation and Interferon-therapy was referred to our department for a restaging with 18F-FDG-PET/CT. The scan was acquired 100 min after intravenous application of 383 MBq 18F-FDG. The blood glucose was 96 mg/dl at the time of injection. Computed tomography was carried out utilising 2-slice spiral CT after intravenous injection of 180 ml solustrast 300 with reconstruction slice-thickness being 2.5 mm. The fused 18F-FDG-PET/CT images demonstrated cutaneous foci of moderate to intense tracer accumulation in both lower extremities especially in the right knee. Furthermore they showed tracer accumulation in inguinal lymph nodes on both sides. In view of

the 18F-FDG-PET/ CT scan findings, the patient was referred for lymph node excision of the right inguinal region, which proved to be metastases in histopathology. Consequently, the patient underwent systemic chemotherapy. A follow-up 18F-FDG-PET/CT scan performed later showed a complete remission with no vital tumour.

### DISCUSSION

Mycosis fungoides (MF) is a non-Hodgkin lymphoma of T cell origin that primarily involves the skin. Despite being a rare condition, it is the most common type of cutaneous T cell lymphoma<sup>(1)</sup>. Most patients present with skin patches or plaques, typically in non-sun-exposed areas<sup>(2, 3)</sup>. The staging of patients with MF is based primarily on the extent of skin disease, type of

skin lesion, and involvement of extracutaneous sites, such as lymph nodes (LN), viscera, and peripheral blood (4,5).

Positron emission tomography (PET) and PET/computed tomography (PET/CT) have emerged as the standard of care for the staging, monitoring of response to therapy, and detection of disease recurrence for Hodgkin's (HD) and non Hodgkin's lymphomas (NHL) (6-10). A review of a series of 13 patients with MF has demonstrated the superiority of PET/CT over CT alone in detecting nodal involvement (11). Accurate staging is important for prognostic purposes and to determine appropriate treatment options (2). Treatment of MF varies

according to the stage of the disease. Early-stage MF is highly responsive to topical treatments such as topical chemotherapy, ultraviolet irradiation (psoralen + UVA) and immunomodulatory agents such as interferon and retinoids (1). In contrast systemic disease requires more aggressive and potentially more toxic therapy such as systemic chemotherapy or total-skin electron beam therapy (2). Our patient underwent systemic chemotherapy only due to 18F-FDG-PET/CT findings. This shows the significance of 18F-FDG-PET/CT in the therapeutic management of MF and may eventually help to establish its value in staging of this rare disease.

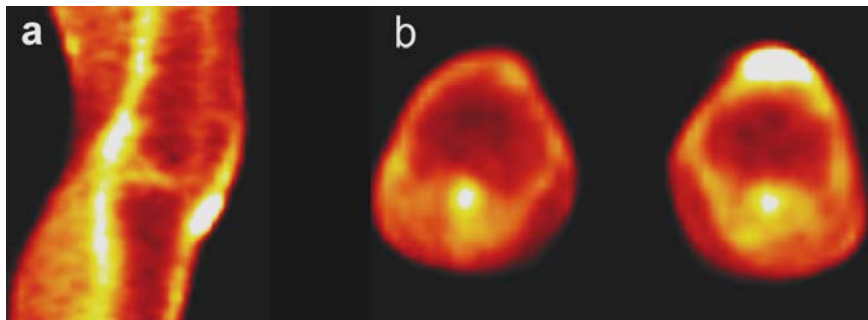


Figure 1. Cutaneous tracer accumulation in the right knee (a) sagittal view (b) transversal view.

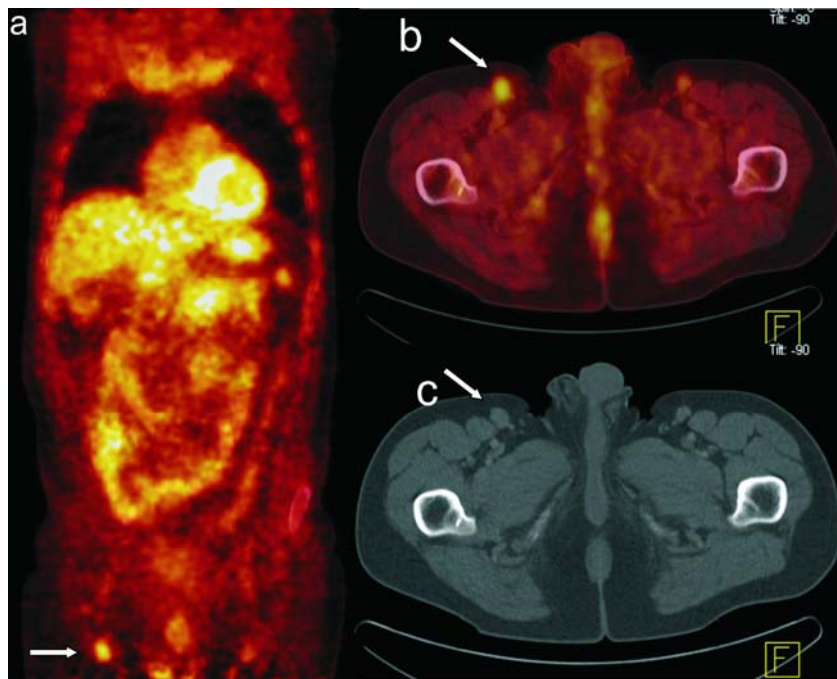


Figure 2. Inguinal lymph nodes on both sides, (a) PET image coronal view, (b) PET-CT image transversal view, (c) CT image transversal view.

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