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To the Editor: Tuberculosis (TB) has been extensively described in association with various malignancies, especially Hodgkin’s disease (HD) [1]. When TB is accompanying malignant lymphomas is often characterized by an atypical clinical course, with unusual extrapulmonary localizations [2]. Clinical forms of cutaneous TB have been described: These are: the primary TB inoculation, lupus vulgaris (LV), TB verrucosa cutis, scrofuloderma, orofacial TB and miliary TB [1, 3, 4]. A common form of cutaneous TB is LV [4]. Fluorine-18 fluorodeoxyglucose (18F-FDG) whole-body PET scanning has been used for monitoring disseminated TB [5, 6]. 18F-FDG accumulates not only in malignant tumors but also in inflammatory lesions of both infectious and non-infectious origins [7]. We present the 18F-FDG-PET/CT findings in a case of HD who also developed LV lesions after chemotherapy.

A 25 years old man with a history of mediastinal lymphadenopathy that was diagnosed as HD 11 months ago, received 6 cycles of chemotherapy with adriamycin, bleomycin, vinblastine and dacarbazine. The last chemotherapy treatment was 20 days before he was examined by a 18F-FDG-PET/CT scan. One month ago he was clinically diagnosed as having LV with granulomatous and ulcerative lesions on left hand and the right pretibial region and received anti-TB treatment with isoniazid, rifampin and ethambutol for one month. The scan was performed from the thighs to the skull base. There were nodular lesions of slightly increased 18F-FDG uptake at the lower parenchymal zones of both lungs, which did not reach the form of typical malignancy but were compatible with inflammatory processes and also increased 18F-FDG uptake on inguinal lymphadenopathies, and cutaneous and subcutaneous bilaterally hypermetabolic lesions on the left hand.

Figure 1. Nodular lesions of slightly increased 18F-FDG uptake at the lower parenchymal zones of both lungs, not reached to typical malignancy but were compatible with inflammatory processes and also increased 18F-FDG uptake on inguinal lymphadenopathies, and cutaneous and subcutaneous bilaterally hypermetabolic lesions on the left hand.

Figure 2. Increased 18F-FDG uptake with cutaneous and subcutaneous hypermetabolic lesions on the right leg zones.
Immunodeficiency in HD is a well-known and cell-mediated condition, which may result in infections including those by mycobacterium species [2]. Occurrence of TB and reactivation is higher in HD when compared with other malignancies [1]. Tuberculosis causing infections during or after chemotherapy for HD can also make differential diagnosis between resistant and relapsed malignancy difficult [2]. The clinical diversity of cutaneous TB depends on the route of acquisition of infection and on the patient’s immune status [8].

Lupus vulgaris can appear after inoculation or haematogenously on the head and neck particularly around the nose and the lobes of the ears and typically as reddish brown plaques [3, 5]. Our case is an unusual example of the presence of LV at the hand and the foot in a patient with HD (Fig. 3a, 3b). For staging HD [9] and for inflammatory or infectious diseases, 18F-FDG-PET/CT has been widely used because increased 18F-FDG concentration representing increased cell glycolysis is demonstrated in activated macrophages, lymphocytes and granulocytes as well as neoplastic cells [10]. Therefore, increased 18F-FDG uptake might be expected in TB infections [11]. However, we believe this is the first report of intense multifocal 18F-FDG uptake in LV.

Bibliography


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**Figure 3.** (a): Cicatricial and granulomatous lesions with sharp edges on the dorsum of the left hand, and (b): extensive lesions with an ulcer located on the right pretibial region and the dorsum of the foot.