Comparison of MRI and ^{18}F -FDG PET/CT in a patient with diffuse large B-cell lymphoma only involving prostate and left testicle

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Abstract

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Full Text

A 66-year-old man was admitted to our hospital due to frequent urination and dysuria for 1 month. Echocardiography revealed prostatic hyperplasia. Pelvic MRI showed enlarged prostate with multiple nodules in the central gland which showed isointense on T1-weighted imaging (a), hyperintense on diffusion-weighted imaging (b) and hypointense on T2-weighted imaging (c). The patient underwent biopsy and transurethral resection of the prostate which indicated the diagnosis of diffuse large B-cell lymphoma (DLBCL) by histopathological and immunohistochemical examinations. ^{18}F -FDG PET/CT was performed to evaluate the extent of the disease, which showed diffuse marked uptake of ^{18}F -FDG in the prostate with SUVmax 32.7 (d-f). In addition, the left testicle showed high uptake of ^{18}F -FDG (f) without abnormal foci in other parts of the body (g). Finally, the patient received four cycles of chemotherapy with R-CHOP regimen (rituximab 375 mg/m² on day 1, cyclophosphamide 750 mg/m², doxorubicin 50 mg/m², vincristine 2 mg/m² on day 2 intravenously and prednisone 100 mg on day 2 to 6 orally) before underwent interim ^{18}F -FDG PET/CT, which showed a complete remission because the high metabolic lesions in the prostate and left testicle were disappeared (h-k).

DLBCL is the most frequent non-Hodgkin lymphoma, but rarely involves the prostate and left testicle [1]. Prostate DLBCL, an uncommon phenomenon, is often misdiagnosed as benign prostatic hyperplasia owing to similar clinical symptoms, MRI and CT manifestations [2]. The treatment modality of prostate DLBCL has not been fully established, usually with chemotherapy, radiotherapy or radical prostatectomy [2, 3]. In this case, we found that R-CHOP regimen is an effective therapy for prostate DLBCL and ^{18}F -FDG PET/CT shows its advantages when compared with MRI in diagnosing, assessing disease extent and evaluating treatment response.

Declarations

Compliance with ethical standards

Conflicts of interest The authors declare that they have no conflict of interest.

Ethics approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from the patient for publication of this case.

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Figures

Figure 1

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