"Wandering Spleen" With Lymphomatous Involvement

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Abstract: Wandering spleen is a rare condition caused by either lack or the laxity of ligaments, which results malposition in the lower abdomen or pelvis. FDG PET/CT is the cornerstone of the staging procedures in the management of lymphomas leading to upstaging and picking up occult lesions in the spleen and extranodal sites. Herein, we reported initial staging ^{18}F-FDG PET/CT findings of a woman with Hodgkin lymphoma whose spleen was absent in normal position and multiple intense heterogenous hypermetabolism in a pelvic mass raised a suspicion of wandering splenic involvement. The confirmation was made with selective spleen SPECT/CT images thereafter.

Key Words: Hodgkin lymphoma, FDG PET/CT, wandering spleen, selective spleen scintigraphy

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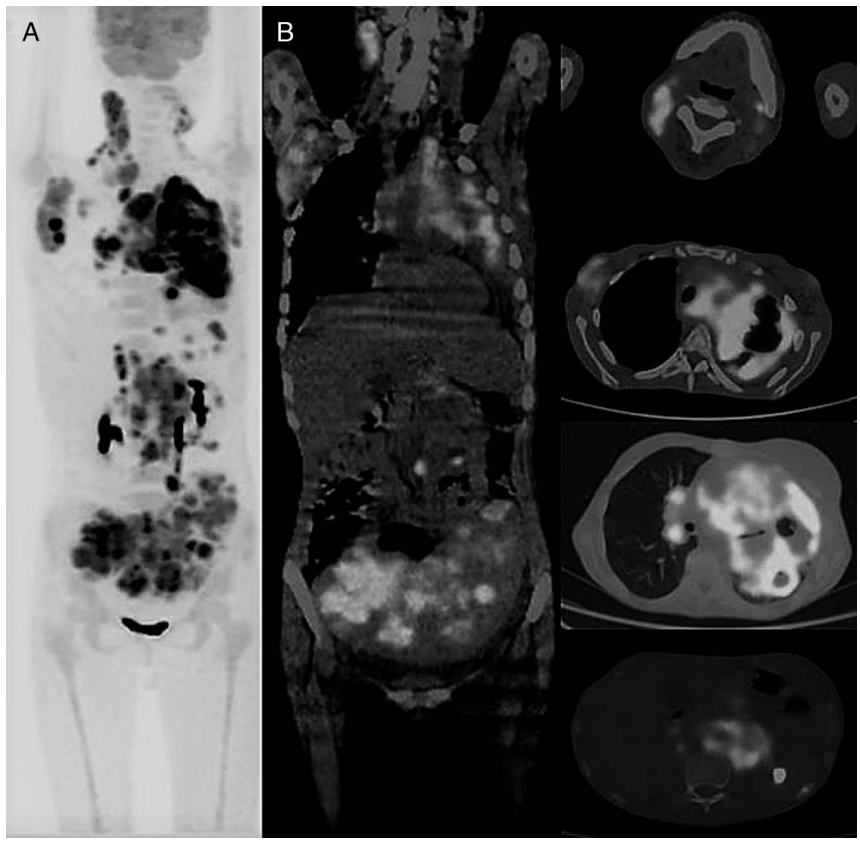

FIGURE 1. A 21-year-old woman was admitted to the internal medicine department with complaints of weight loss, fever, and dyspnea. Physical examination revealed bilateral fixed, solid, and conglomerated cervical and axillary lymphadenopathy, as well as pelvis mass. Ultrasonography-guided Tru-Cut biopsy of the right supraclavicular lymph node was reported as nodular sclerosis subtype of Hodgkin lymphoma (HL). On initial staging ^{18}F-FDG PET/CT (**A** and **B**), supra/infradiaphragmatic multiple lymph nodes, a large cavitary lesion and widespread consolidation area in the left lung parenchyma, and a lytic lesion in the posteromedial part of the left 11th rib were observed, all with intense FDG accumulation. Abdominal slices revealed the absence of the spleen in the left upper quadrant, which was replaced by the left lobe of the liver. On pelvic slices, multiple hypermetabolic soft tissue density lesions were also detected, giving the first impression of pelvic-located massive lymphadenomegaly, but then in light of fused FDG PET/CT slices (**B**) raising the suspicion of lymphomatous involvement of a wandering spleen.

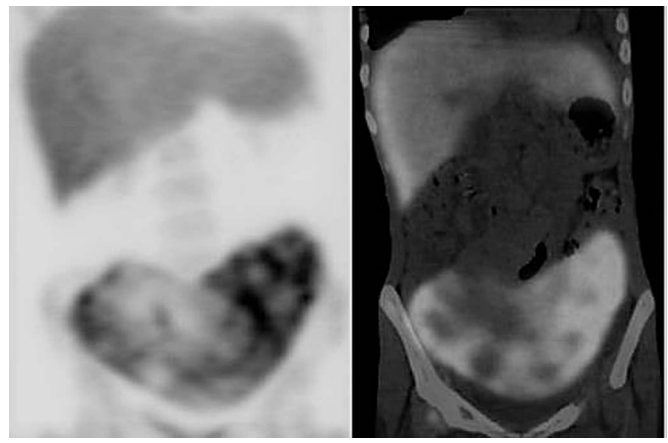

FIGURE 2. Selective spleen scintigraphy (SSS) using ^{99m}Tc-labeled denatured autolog erythrocytes was requested and then truly confirmed the wandering pelvic spleen with intense uptake along with hypoactive focal splenic lesions. The diagnosis of pulmonary involvement of lymphoma was also verified, histopathologically. Splenic involvement is present in 30% to 40% of patients at presentation with HL.[1,2] Accurate evaluation of splenic involvement is necessary in HL, which may upstage the disease and hence alter the treatment. State-of-the-art of ^{18}F-FDG PET/CT application is of utmost importance in staging procedure. Wandering spleen is a rare condition caused by either lack or the laxity of ligaments, which makes a way to malposition in lower abdomen or pelvis, with a reported incidence of less than 0.5%.[3,4] Patients usually present with an asymptomatic mass; however, abdominal complaints may occur due to torsion or infarct of wandering spleen.[5] Detection of splenic tissue can be made by demonstrating phagocytic ability with SSS. The value of ^{99m}Tc-RBC scintigraphy in the evaluation of a wandering spleen was first reported in literature with useful information on splenic blood volume and its location.[6] Although a few cases of PET/CT findings of WS, either with FDG or ^{68}Ga-DOTA, have been reported in the literature,[7,8] a case of lymphomatous involvement of a wandering spleen has not been demonstrated on ^{18}F-FDG PET/CT, yet. We presented a woman with HL, with a prediagnosis of splenic involvement of an extraordinary pelvic located wandering spleen on ^{18}F-FDG PET/CT, confirmed by SSS SPECT/CT imaging, subsequently. SSS may be considered to confirm the presence of functioning splenic tissue in such specific conditions, as in this case.