Usefulness of Tc-99m labelled heat-denatured red blood cell scintigraphy for diagnosis of peritoneal splenosis in a patient with hepatocellular cancer: A case report

Francisco Javier García-Gómez1, María Dolores Martínez-Valle-Torres2, Esperanza Ramos-Moreno3, Tomader Amrani-Raissouni2, Pedro Moya-Espinosa2, Salomé Sanz-Viedma2 and José Manuel Jiménez-Hoyuela2

Department of Nuclear Medicine. 1Hospital Universitario Virgen del Rocío. Sevilla, Spain. 2Hospital Universitario Virgen de la Victoria. Málaga, Spain

CASE REPORT

We report the case of a 47-years-old male with diagnosis of hepatocellular carcinoma in a patient with genotype 1a hepatitis C virus cirrhosis (Child-Pugh grade A) who was subject to a splenectomy after an abdominal trauma in the infancy. Lymph nodes larger than 2.5 cm on the left side of the abdomen (Fig. 1A) and subcentimetric lymph nodes in hipogastric area (Fig. 1B) were observed in a routine follow-up computed tomography. For distinguishing between malignant and benign lesion, a whole body positron emission tomography/computed tomography (PET/CT) was performed 60 minutes after injection of 347.4 MBq fluorine-18 deoxyglucose (18F-FDG). The left-sided lesion was observed at PET/CT scan, with maximum standardized-uptake-value (SUVmax) of 1.1 (Fig. 1C), but malignancy could not be determined. Furthermore, a 4.3 cm mass with SUVmax 1.6 was found (Fig. 1D), that could correspond to accessory spleen or splenosis. A Tc-99m labelled heat-denatured red blood cell scintigraphy and a single photon emission computed tomography (SPECT/CT) after injection of 555 MBq radiolabeling autologous red blood cells were performed to confirm the diagnosis of splenosis. The Tc-99m labelled heat-denatured red blood cell scintigraphy revealed two areas of splenosis, one in the upper left abdomen and another in the ileocecal area (Fig. 2). Oncology committee determined the need for clinical and radiological follow-up, avoiding invasive procedures with high risk for bleeding.

Fig. 1. Lymph nodes larger than 2.5 cm in left side of abdomen (A) and subcentimetric lymph nodes in hipogastric area (B) observed at follow-up computed tomography, and corresponding to lesions in 18F-FDG PET/CT scan with SUVmax 1.1 and 4.3, respectively (C and D).

Fig. 2. Maximum intensity projection and axial slices of Tc-99m labeled heat-denatured red blood cell SPECT/CT, who reveal two focus of splenosis in upper left abdomen (arrow) and ileocecal area (arrow head).
DISCUSSION

The term splenosis was introduced by Buchbinder and Lipkoff (1) to designate the heterotopic autotransplantation of splenic tissue which generally occurs after traumatic splenic rupture or surgery. After incidentally diagnosed in more patients, differential diagnosis of splenosis is needed and includes renal tumors, adrenal masses, lymphomas, and metastatic disease, and it should be kept in mind when approaching a digestive bleeding (2,3). The performance of scintigraphy with 99mTc-labelled heat-denatured erythrocytes allows the non-invasive diagnosis of this entity and avoids more aggressive diagnostic techniques (4).

REFERENCES