F18-FDG PET/CT in retroperitoneal desmoplastic small round blue cell tumour occurring in a patient with in situ breast carcinoma

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DESCRIPTION

We present a case of a 58-year-old woman, diagnosed with low-grade in situ ductal breast carcinoma (3 mm), who underwent conservative mastectomy. She was admitted 7 months later for diffuse abdominal and bone pain, weight loss, and an enlargement of the abdomen, asthenia, cough

and nausea. Breast imaging and specific clinical examinations were negative for recurrence of malignant breast disease, but chest and abdominal CT revealed multiple tumour masses in the mediastinum, and multiple lytic lesions in the sternum, ribs, right humerus and pathological para-aortic lymph nodes (figure 1).

The common tumour markers for breast, ovaries, lung, colon, pancreas and neuroendocrine tumours were normal and, apart from a mild anaemia, no other significant serological changes were found.

The clinician requested an F18-fludeoxyglucose positron emission tomography (FDG PET)/CT examination in order to define the extent of the disease and to find the primary site. The result showed a very high and extensive FDG uptake in the retroperitoneal area due to a 27 cm tumour involving both ureters, with secondary obstruction (figure 2A); there was also high pathological FDG activity in the bilateral cervical lymph nodes, mediastinum and inguinal lymph nodes; there were multiple bone lesions in the right humerus, sternum, ribs, pelvic bones and left femur (figure 2B). The diagnosis was possible metachronous lymphoma or

Figure 1 Axial abdominal CT section, presenting pathological para-aortic tumour mass.

Figure 2 Whole-body F18-fludeoxyglucose positron emission tomography (FDG PET)/CT coronal section, presenting pathological high uptake (A) in a massive retroperitoneal tumour mass and (B) in cervical and mediastinum lymph nodes, and in the retroperitoneal mass, and lytic lesions in right humerus and left femur.

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Learning points

- ▶ Multiple malignant pathologies should not be missed in a patient with cancer.
- ▶ F18-fludeoxyglucose positron emission tomography (FDG PET)/CT is not routinely indicated in the evaluation of the early stages of breast carcinoma, but should be used anytime during follow-up, if the clinical situation requires it.
- ▶ Desmoplastic small round cell tumour is a rare sarcoma with aggressive evolution, presenting high F18-FDG uptake at PET/CT.

sarcoma.¹ Surgical biopsy of the retroperitoneal mass and inguinal lymph nodes was indicated. The histology of both specimens was desmoplastic small round cell tumour. This is a rare

sarcoma characterised by poorly differentiated small round blue cells and abundant fibrosclerotic stroma.²

Contributors DP was responsible for imaging evaluation and design of the case; EB and CP performed the imaging examinations and revised the manuscript; and AP revised the manuscript.

Competing interests None declared.

Patient consent Obtained.

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