

Interesting images

Bilateral ovarian plasmacytoma detected on ^{18}F -FDG PET/CT[☆]

Plasmocitoma ovárico bilateral detectado por

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ARTICLE INFO

Article history:

Received 26 August 2019

Accepted 8 September 2019

Available online xxx

A 48 year-old woman with a prior solitary bone plasmacytoma (SBP) in the left femur in the setting of a pathological fracture, which was treated with radiotherapy and osteosynthesis. Two years later, the patient presented with abdominal pain and a pelvic ultrasound reporting bilateral ovarian masses measuring up to 10 cm. Patient's blood cell counts, creatinine, lactic dehydrogenase and serum and urine kappa chains were normal. FDG PET/CT was performed to further characterize the index pelvic masses. PET/CT findings are described in Fig. 1. Subsequently, the patient underwent hysterectomy and bilateral salpingo-oophorectomy. Pathological findings are described in Fig. 2.

Due to multi-focal PET/CT findings, prior bone plasmacytoma and anatomic-pathological findings, the diagnosis was amended to multiple myeloma. The patient received chemotherapy with CyBORD (Cyclophosphamide, bortezomib and dexamethasone) for four cycles and then underwent consolidation therapy with an autologous stem-cell transplantation.

There are two types of solitary plasmacytomas depending on their localization, solitary bone plasmacytoma (SBP) and solitary extramedullary plasmacytoma (SEP); SBP represent two third of cases. SEP are more often located in head and neck, however, plasmacytomas in female reproductive organs are extremely rare, there

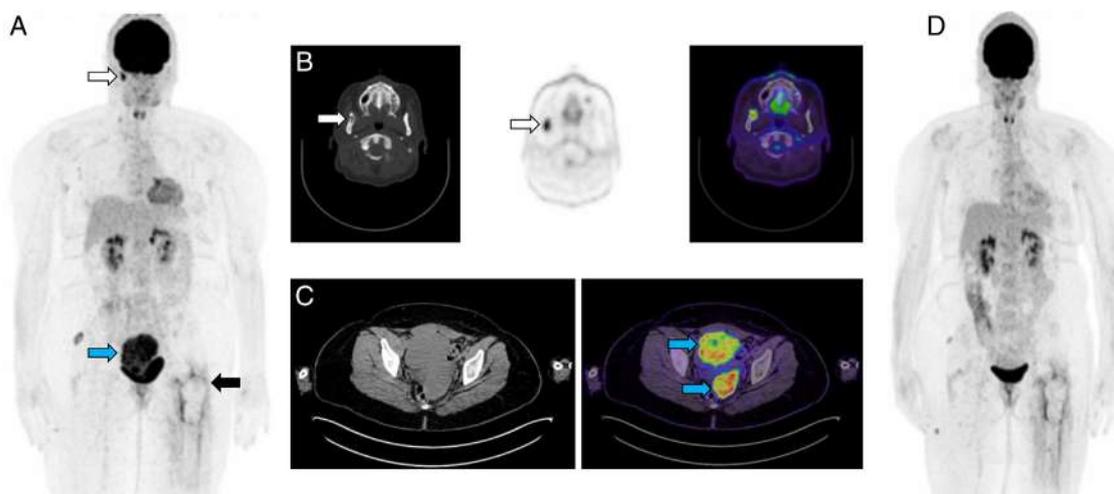


Fig. 1. Maximum projection intensity (MIP) from FDG PET/CT (A) demonstrated mild tracer activity related to post-surgical changes in the left femur (black arrow), related to prior SBP. Intense metabolic activity (SUVmax 19) was seen in both ovaries (blue arrow on A and C), measuring $8.7 \times 6.0 \times 8.7$ cm on the right (located anterior to the uterus) and $5.7 \times 4.4 \times 5.6$ cm on the left (located posterior to the uterus). There was also intense pathological uptake (SUVmax 19) in the right mandibular ramus associated with lytic changes on CT (white arrow on A and B) compatible with a further site of disease. On (D), there is MIP of a follow-up FDG PET/CT after chemotherapy, with a complete metabolic response at all sites (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article).

[☆] Please cite this article as: Cárdenas-Perilla R, Urrego-Meléndez OM. Bilateral ovarian plasmacytoma detected on ^{18}F -FDG PET/CT. Rev Esp Med Nucl Imagen Mol. 2019. <https://doi.org/10.1016/j.remnm.2019.09.005>

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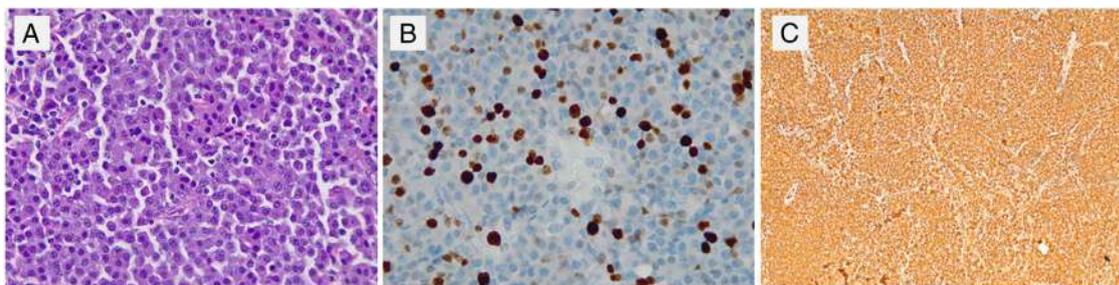


Fig. 2. Hematoxylin and eosin staining (A) show mature cell plasma cells. On (B) there is Ki67 proliferation index of 50%. On (C) a Kappa light chain expression in the 100% of the cells. These findings were seen in both ovaries. There was no tumor compromise of the uterus and fallopian tubes.

are few cases described, and bilateral ovarian plasmacytomas has been reported just in one case.¹

Progression to multiple myeloma in patients with solitary plasmacytomas, is more frequent in patients with SBP compared to SEP, which confers a worse prognosis. FDG PET/CT has demonstrated to be an independent predictor of early evolution to MM in patients with solitary plasmacytoma, with number of lesions (more than two), FDG positivity, serum free light chain levels and SBP as risk factors.² In several studies FDG PET/CT revealed occult lesions not detected by conventional imaging and changing the treatment in about 35% of patients.³

It is important to note that extramedullary plasmacytomas can be present at any time in patients with multiple myeloma and should not be confused with SEP, its prognosis and treatment differ significantly.

Conflict of interest

None.

Acknowledgement

Dr. Hector Espinosa, pathologist for the images of tumor pathology and immunochemistry. Dr. Michael Hofman for his thorough case review.

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