Interesting images

Isolated adrenal metastasis of small cell neuroendocrine carcinoma of the ovary detected with FDG-PET/CT

Metástasis suprarrenal única de cáncer de ovario neuroendocrino no microcitico detectada con FDG-PET/TAC

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The small cell neuroendocrine subtype of ovarian carcinoma is a rare malignant tumor, representing less than 2% of all gynecologic malignancies with a high metastatic potential and the possibility to metastasize to practically any tissue. Although the adrenal gland is a common site for metastasis, metastases from the ovary are very rare.\textsuperscript{1–3}

A 71-year-old woman with small cell neuroendocrine carcinoma of the ovary confined to the ovary was treated with total abdominal hysterectomy with bilateral salpingo-oophorectomy (Fig. 2A), and adjuvant chemotherapy. Six months later during follow-up, FDG-PET/CT imaging was carried out. Prior to the examination, 40 ml of ionic iodinated contrast agent diluted in 1500 ml of water was given to patient orally. The examination started 60–90 min after the intravenous injection of 350 MBq of $^{18}\text{F}$FDG. No iv contrast material was used for the CT scans.

\textbf{Fig. 1.} Maximum-intensity projection (MIP) of FDG-PET data (A), axial, coronal FDG-PET, CT, and fused images (B) revealed a focus of increased FDG uptake in left adrenal gland with no other metastatic spread.

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Fig. 2. Primary focus of the tumor in ovary. (A) Histopathological verification determined small cell neuroendocrine carcinoma of the ovary. Hematoxylin–eosin staining (40×) revealed positive synaptophysin, and negative chromogranin and inhibin staining with small cell carcinoma infiltration in ovarian stroma. (B) Histopathological verification of adrenal biopsy, also, revealed small cell neuroendocrine carcinoma of the ovary.

FDG-PET/CT revealed intense hypermetabolic lesion in left adrenal gland with no other sites of metastatic spread (Fig. 1). Physiologic FDG uptake was viewed in the colon at the lower right quadrant of abdomen and in the renal pelvis at the right side. Adrenal metastasis was resected. Histopathological verification determined adrenal metastasis of small cell neuroendocrine carcinoma of the ovary (Fig. 2B).

FDG-PET/CT has the greatest utility in settings of suspected ovarian cancer recurrence, particularly in patients with rising CA-125 serum level or negative conventional imaging.1,3 FDG-PET holds promise in the evaluation of cancer spread or recurrent or residual disease when other radiographic data are non diagnostic. The unique fact about this case is that isolated adrenal metastasis of small cell neuroendocrine carcinoma originated from ovary is remarkably rare.

References