Interesting images

Diagnosis of penile metastases of prostatic origin with $^{11}$C-Choline PET/CT

Diagnóstico de metástasis peneana de origen prostático con $^{11}$C-Colina PET/TC

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We studied a 46-year-old male diagnosed with prostate adenocarcinoma (Gleason 4 + 4, PSA 94 ng/ml) treated with radiotherapy and hormone therapy (PSA nadir < 0.1 ng/ml). At 9 months he presented an elevation in biochemical parameters (PSA 2.2 ng/ml) with negative complementary imaging tests.

A PET/CT study with $^{11}$C-Choline was performed showing only two hypermetabolic foci in the penis, one with marked intensity in the corpus cavernosum and the other was more distal with less uptake. In the absence of active images in the whole body scan it was decided to perform a biopsy of the larger lesion which determined the metastatic origin of an adenocarcinoma of the prostate (Fig. 1).

The role of PET with choline is established in the restaging of prostate cancer when there is biochemical recurrence since it allows localization of the recurrence and thus, individualization of the therapy.

![Fig. 1. PET/CT study obtained immediately after endovenous administration of 296 MBq of $^{11}$C-Choline. Two hypermetabolic penile foci were observed, the most active (SUVmax. 4.8) being in the corpus cavernosum and the other was more distal and with less uptake (SUVmax. 2.5). No other images with $^{11}$C-Choline uptake considered to be pathologic were observed in the whole body scan.](image-url)
In this case, it allowed detection of metastasis in an infrequent location. Penile metastases of adenocarcinoma of the prostate are rare, with their origin being lymphatic or hematogenic dissemination or by direct extension. The most common localization is the corpus cavernosum followed by the glans, urethra, prepuce and the corpus spongiosum. The symptomatology includes pain, priapism and lower urinary tract symptoms.\textsuperscript{1,2}

The prognosis of these patients is bad, with an elevated mortality (80\% at 6–12 months), making the most appropriate treatment to follow controversial, including chemotherapy and radiotherapy, reserving surgery for cases with intense, difficult to manage, pain.\textsuperscript{3} In the present case, non-surgical treatment was the approach implemented due to the lack of clinical symptomatology.

References