A rare case of a vaginal collision tumor

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Section: Genital (female) imaging
Area of Interest: Genital / Reproductive system female
Procedure: Diagnostic procedure
Imaging Technique: MR
Special Focus: Neoplasia Case Type: Clinical Cases
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Patient: 72 years, female

Clinical History:

A 72-years-old woman presented to our institution with a history of abnormal vaginal bleeding for two months. The patient had an hysterectomy performed 30 years before. Clinical observation revealed a hard mass on the right vaginal wall. A biopsy and pelvic MRI were performed, and the patient was referred to surgery.

Imaging Findings:

The patient was submitted to hysterectomy and bilateral adnexectomy thirty years ago, due to bleeding of numerous leiomyomas (sic). At the date of the pelvic MRI, a filling of the vaginal canal by a solid and heterogeneous tumor was noted. This tumor had lobulated contours, and grossly measured 6 cm in its larger axis. It showed characteristics of malignancy. The lower third of the vagina was free, and no vulvar component was found. There was no transposition of the vaginal dome, and therefore no invasion of the intraperitoneal cavity, without evidence of a tumor component involving the adjacent organs, namely the anorectal complex, the urethra or the bladder. No invasion of the pelvic wall was noted. There was no ascites or peritoneal metastases. No abnormal lymph nodes were noted.

Discussion:

A collision tumour is a rare neoplasm where two adjacent but histologically distinct tumours co-exist with a well defined interface [1]. The diagnosis requires histological studies, and no radiological features are specific enough. When a tumour demonstrates imaging findings that cannot be attributed to one histologic type, a collision tumour should be considered [2]. However, primary vaginal neoplasms are more common than collision tumours and should be the first on the list in the differential diagnosis of vaginal lesions. In this case, the tumor had very low signal intensity on T2 weighted images, and it showed restricted diffusion and contrast enhancement only in its periphery. These are unusual features for a primary vaginal malignancy. Primary vaginal carcinoma is, in general, a rare malignancy, and arises only from the vagina with no involvement of
the cervix or the vulva [1].
The commonest tumour is the squamous cell carcinoma, occurring in elderly women [1].
Although less frequent, adenocarcinoma of the vagina, primary vaginal melanoma and vaginal sarcoma (namely botryoid sarcoma) must also be considered [1].
Imaging features of primary vaginal malignancies depend on the histologic type of malignancy [2].
Their prognosis depends on the extent of loco-regional extension, which will dictate the surgical protocol [1].
Local disease has in general, a good prognosis. Adjuvant therapy will depend if there are distant metastasis or loco-regional lymph nodes [2].

Written informed patient consent for publication has been obtained

Differential Diagnosis List: Collision Tumor consisting of invasive pavementocellular carcinoma and leiomyosarcoma, squamous cell carcinoma of the vagina, adenocarcinoma of the vagina, vaginal sarcoma

Final Diagnosis: Collision Tumor consisting of invasive pavementocellular carcinoma and leiomyosarcoma

References:

Description: A low signal intensity solid lesion was found on the right upper vaginal wall, without disrupting the vaginal dome or spread to the surrounding organs. Origin: JPCaldeira IPOLFG
Description: A low signal intensity solid lesion was found on the right upper vaginal wall, without disrupting the vaginal dome or spread to the surrounding organs. Origin: JPCaldeira, IPOLFG
Figure 3

Description: The lesion showed peripheral enhancement after Gadolinium administration.

Origin: JPCaldeira, IPOLFG
Description: Axial ADC map of the pelvis, showing low signal intensity. The tumour shows restricted diffusion only in the periphery. Origin: JPCaldeira
Description: Axial b 1000 of the pelvis showing high signal intensity. The tumour shows restricted diffusion only in the periphery. Origin: JPCaldeira IPOLFG