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Prostate gland metastasis as a late relapse of rectal adenocarcinoma

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KEY WORDS:

Metastatic cancer. Rectal adenocarcinoma. Prostate gland metastasis.

ABBREVIATIONS:

CT: computed tomography

MRI: magnetic resonance imaging

PET- CT: positron emission tomography-CT

DISCLOSURE:

The authors report no conflicts of interest in this work.

Patient consent: Obtained.

We present a case report of a 49 year old male patient, with a diagnosis of distal rectal adenocarcinoma in 2015 (T4N0M0), treated with neoadjuvant chemoradiotherapy and extended abdominal perineal resection with Pathology result: ypT2N0, tumor free margins, mesorectal excision, with no signs of invasion of lymphatic, vascular, lymph nodes or perineural tissues. The patient was commenced on adjuvant chemotherapy with FOLFOX completing 8 cycles. In 2019 he presented a lesion in the right superior

lobe (RSL). The patient underwent a right superior lobectomy with pathology results of enteric adenocarcinoma as a metastasis of the known primary.

In 2020 the patient came in with pelvic pain, CT scan and MRI showed a nodule in proximity with the prostate gland and a new pulmonary nodule next to the suture, with increased metabolic activity in PET- CT (Fig.1) suspected of malignancy.

A biopsy of the prostatic gland nodule revealed an adenocarcinoma similar to the known rectal origin. Immunohistochemistry showed PSA-, CK20+, CDX2+. Subsequently the patient underwent 5 cycles of FOLFOX-Bevacizumab. In our tumor multidisciplinary consultation the decision of treating with stereotactic ablative radiotherapy (SABR) of the pulmonary and prostatic lesion was made with complete remission confirmed with CT, MRI and tumor markers.

The digestive tract is the most common source of metastasis to the prostate gland, although its development is very uncommon, about 1-12% found in autopsy reports. (1-3). The longest interval of time found in literature was 10 years (3), between the end of the primary colorectal tumor treatment and the onset of the prostatic metastasis.

Biopsy of the tumor is mandatory for differential diagnosis, as most primary urinary tract adenocarcinomas (particularly the bladder adenocarcinoma and prostatic ductal adenocarcinoma) are enteric type, mimicking the morphology and histology that are found in colon adenocarcinoma (4). Immunohistochemistry is the key to make the diagnosis with the CK7, CK20, and the newly discover CDX-2, a monoclonal antibody that works activating the transcription of proteins specific to the intestine (2,4,5), as the most important ones. CDX-2 is positive in 60-98% of colorectal adenocarcinomas and 0% in primary adenocarcinoma of the prostate gland, its use combined with other markers specific to prostate gland primary tumors as PSA and NKX (4), makes it crucial for diagnosis. In this case, CDX-2 was positive in the prostatic sample and primary tumor, as well as CK20+ and PSA negative, making the diagnosis of rectal adenocarcinoma metastasis to the prostate gland stronger (5).

Conclusion

The differential diagnosis of tumor lesions to the prostate gland in patients with a history of colorectal adenocarcinoma is difficult due to similar histology and imaging, being the CDX-2 crucial for confirming metastatic lesions allowing a better targeted treatment.

REFERENCES

1. Bowrey DJ, Otter MI, Billings PJ. Rectal infiltration by prostatic adenocarcinoma: report on six patients and review of the literature. 2003;(Table 1):382–5.
2. Youssef FR, Hunt L, Meirring PD, et al. Metastasis of a cecal adenocarcinoma to the prostate five years after a right hemicolectomy: a case report. 2011;2–4.
3. Schips L, Zigeuner RE, Langner C, et al. Metastasis of an ascending colon carcinoma in the prostate 10 years after hemicolectomy. 2002;168(August):641–2.
4. Owens CL, Epstein JI, Netto GJ. Distinguishing Prostatic From Colorectal Adenocarcinoma on Biopsy Samples The Role of Morphology and Immunohistochemistry. 2007; 131(April):599–603.
5. Fusco N, Sciarra A, Guerini-rocco E, et al. Rediscovering Secondary Tumors of the Prostate in the Molecular Era. 2016;23(3):170–9.

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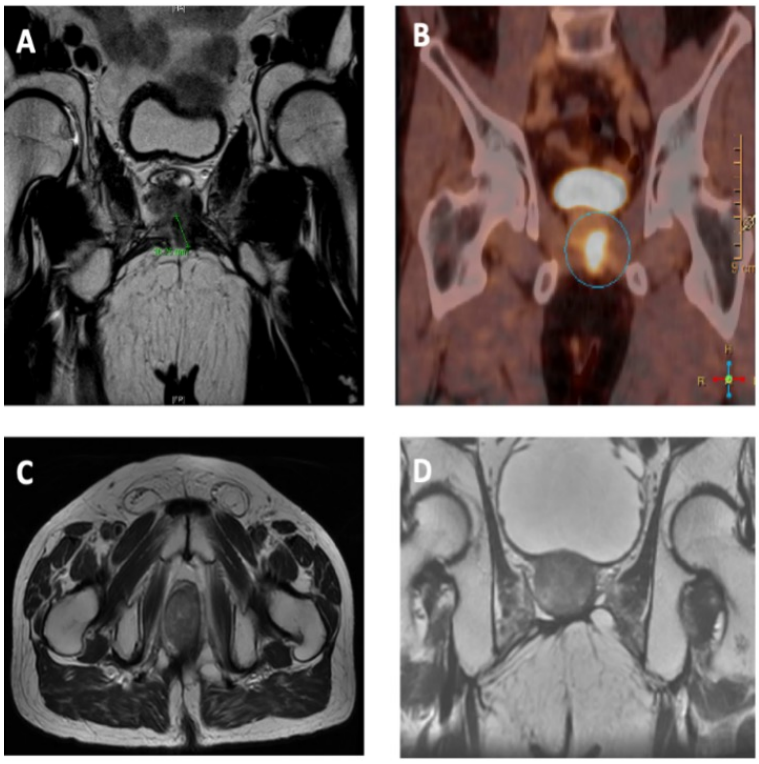

Figure 1. **A**. T2-weighted MRI showing a nodule in contiguity to the prostate gland, hypointense, 16 mm, suspected of malignancy without being able to define if is a primary tumor of the prostate gland or a metastatic lesion of another primary tumor. **B**. PET-CT showed a pathological increased metabolic activity at prostatic gland that suggest a malignant etiology. **C and D**. T2-wighted MRI shows complete remission at prostate gland.