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Case report

Rectal Mass as a Metastatic Manifestation of Prostate Cancer: Case Report

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Abstract

Prostate adenocarcinoma is the most common malignancy in men; however, its mortality does not rank among the top four causes of cancer-related death in this population. The most frequent metastatic sites are bone, liver, and lungs, while involvement of adjacent organs such as the colon or rectum is rare. Nevertheless, when local invasion into the gastrointestinal tract occurs, it is usually associated with a poorer prognosis. Therefore, it is essential to promptly recognize symptoms and consider this possibility as a differential diagnosis when encountering neoplastic-appearing lesions during procedures such as colonoscopy. We present the case of a 70-year-old man with a history of Gleason 4+4 prostate adenocarcinoma, initially treated with radiotherapy and hormone therapy. Years later, he presented with intestinal obstruction, and an infiltrative rectal mass was identified. Biopsy confirmed prostatic metastasis. Despite receiving targeted treatment, the patient died from infectious complications six years after the initial diagnosis.

Keywords

Prostatic intraepithelial neoplasia, neoplasm metastasis, neoplasms of the rectum.

INTRODUCTION

Prostate adenocarcinoma (PCa) ranks among the most prevalent neoplasms worldwide - the most common cancer in males and fifth leading cause of cancer-related mortality, with an incidence of approximately 29.4 cases per 100,000 men[(1)]. Its global significance continues growing alongside increasing cancer rates associated with extended life expectancy in developed and developing nations. While this malignancy frequently metastasizes to bone, lung, and liver, rectal metastasis remains relatively uncommon[(2)], resulting in limited evidence regarding its prognosis, management, and associated manifestations.

CASE PRESENTATION

We present the case of a 70-year-old male patient with a history of hypertension who was diagnosed with prostate adenocarcinoma in 2018, with a Gleason score of 4 + 4. Treatment was initiated with pelvic lymphadenectomy and 40 sessions of radiotherapy, combined with goserelin for one year. Follow-up was suspended due to the 2019 coronavirus (COVID-19) pandemic, so monitoring resumed in 2021. Laboratory tests revealed biochemical relapse, prompting treatment with abiraterone and leuprolide. However, the following year, imaging showed local progression, leading to bilateral orchiectomy and transurethral resection of the prostate.

The patient was admitted to our institution the following year (2023) due to intestinal obstruction. Diagnostic workup included a gadolinium-enhanced pelvic magnetic resonance imaging (MRI), which revealed a necrotic-centered mass in the prostate that had invaded the bladder floor, seminal vesicles, and mid-to-lower rectum, causing partial obstruction of the large intestine (**Figures 1** and **2**). A colonoscopy was performed to assess the extent of involvement and obtain biopsy samples for histopathology. Endoscopic findings showed a friable, infiltrative lesion circumferentially involving the distal rectum, causing luminal stenosis that prevented passage of the scope (**Figure 3**). Histopathological examination confirmed prostate adenocarcinoma, ruling out the suspected diagnosis of a second primary tumor. The patient underwent a diverting colostomy and was placed on palliative systemic therapy. He died six years after the initial diagnosis due to infectious complications.

DISCUSSION

Prostate adenocarcinoma is the most common neoplasm in men, both in Colombia and worldwide; despite this,

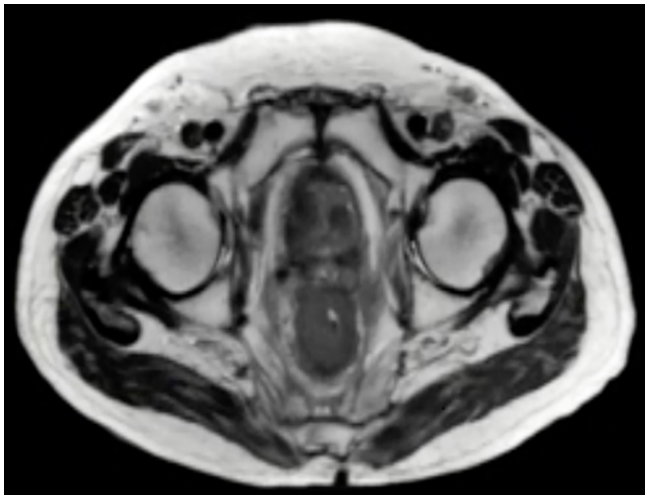

Figure 1. T2-weighted pelvic MRI showing concentric thickening of the rectal walls. Image property of the authors.

Figure 2. Gadolinium-enhanced MRI demonstrating concentric thickening of the rectal wall with involvement of the anterior serosa. Image property of the authors.

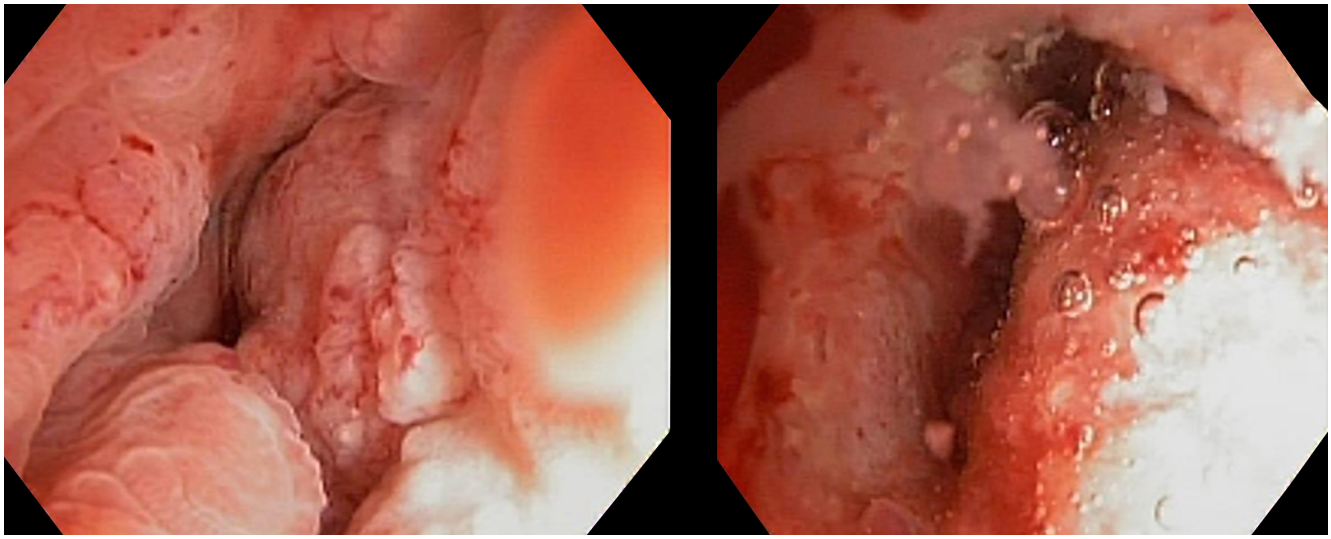

Figure 3. An infiltrative, friable lesion is observed in the rectum, causing luminal stenosis. Images property of the authors.

its mortality rate is not as high compared to other, less frequent neoplasms[1]. This cancer can cause local involvement of nearby organs, such as the bladder, ureters, adjacent lymph nodes, and bones. Globally reported cases have described rare metastatic involvement in organs such as the esophagus, stomach, liver, penis, and brain[3]. Like the aforementioned organs, rectal involvement in prostate adenocarcinoma is uncommon and, according to the literature, is a poor prognostic factor when it occurs[4]. Despite the proximity of the prostate to the rectum, tumor infiltration is rare due to the anatomical presence of the intraprostatic fascia (Denonvilliers' fascia), which acts as a barrier[5].

The proposed mechanisms can be explained by three main theories. The first is direct infiltration of the aforementioned fascia; the second involves drainage from pelvic lymph nodes that receive lymphatic flow from both the prostate gland and the rectum; and the third may be due to seeding of cancer cells in the perirectal tissue during prostate biopsy[5]. Symptoms are nonspecific, often leading to initial consideration of other conditions, such as rectal adenocarcinoma (hematochezia, intestinal obstruction) or radiation proctitis[6]. In our case, it presented as intestinal obstruction, evaluated through imaging, endoscopy, and histopathology.

It is important to note that the endoscopic findings of this condition are not typical and can be mistaken for a primary colon neoplasm, which would prompt immediate surgical management. Differentiating between these two entities is crucial, as their treatments are entirely different. The treatment for a rectal tumor involves chemoradiotherapy, in some cases with a total neoadjuvant therapy (TNT) regimen, whereas prostate tumors are managed with hormonal therapy, chemotherapy, or surgery, depending on disease presentation[7]. Additionally, this distinction may help identify secondary lesions and provide a more accurate prognosis for patients.

CONCLUSION

In patients with advanced prostate cancer, metastatic involvement of the rectum should be considered when rectal symptoms arise. If endoscopically visible lesions are detected, biopsies are essential to confirm the diagnosis or explore differential diagnoses. Confirmation of these metastases indicates a poor prognostic factor, which can help guide treatment decisions.

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