

Metastatic Prostate Adenocarcinoma to Colon, Mimicker of Colon Carcinoma: Report of a Rare Case

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Abstract- Prostate cancer is the second most frequent malignancy in men worldwide. Approximately 20% of patients present with metastatic disease. The most common metastatic sites of prostate cancer are bone, lung and pleura, non-regional lymph nodes, liver, adrenals, and brain. Metastasis of prostate cancer to the stomach and intestines is rare. Differentiation between primary and secondary colorectal cancers is difficult. Here we report a 70-year-old man who was referred to the hospital with abdominal pain, weakness, and melena. An abdominopelvic computed tomography scan was done for further investigation. As a result, colon wall thickness was increased and multiple metastatic bone foci were present. Microscopically, the results revealed malignant tumor of atypical cells with hyperchromatic nuclei. The pathologist reported a malignant undifferentiated tumor and suggested immunohistochemistry (IHC) for differentiation between malignant lymphoma and carcinoma. According to high serum PSA level, a PSA staining was also suggested and performed. IHC results showed positivity for CK (Cytokeratin) and PSA, but negativity for CK7, CK20, and LCA (Leukocyte Common Antigen) in favor of metastatic carcinoma to the colon of prostate origin.

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Keywords: Metastasis; Adenocarcinoma of the prostate; Colon; Mimicker

Introduction

Prostate cancer, the second most frequent cancer in men, is asymptomatic with insidious growth in the early phase (1,2). Metastasis at presentation is seen in about 20% of patients (2) and may compromise quality of life and patient survival (3). A large number of cases is suspected by higher than 4.0 nanograms per milliliter (ng/mL) of prostate-specific antigen (PSA) in plasma. PSA is a glycoprotein with normal expression by the prostate. However, a prostate biopsy and histopathology evaluation are the gold standard for cancer diagnosis (1). Prostate cancer commonly metastasizes to bone, lung, pleura, non-regional lymph nodes, liver, adrenals, and brain (4-6). Case reports of metastasis of prostate cancer to the gastrointestinal system are rare (4,7,8) and the antemortem prevalence is not clear. However, in the autopsy series 0.56% - 11.5% of prostate carcinomas

showed rectal mass at presentation (9).

Case Report

A 70-year-old man was referred to the hospital with abdominal pain, weakness, and a black tarry stool (melena). He was pale and had a lean body mass. On lab results, he had mild anemia with a hemoglobin of 10 g/dL and a screening serum prostate-specific antigen (PSA) level of 50 ng/mL. A total esophagogastroduodenoscopy was done to rule out upper GI bleeding and the findings were insignificant. Therefore, an abdominopelvic computed tomography (CT) scan was done for further investigation. As a result, colon wall thickness was increased and multiple metastatic bone foci were present. On rectosigmoidoscopy, there were multiple colon mucosal lesions and several biopsies were taken. Microscopically, the results revealed malignant tumor of atypical cells with hyperchromatic nuclei. The

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pathologist reported a malignant undifferentiated tumor and suggested immunohistochemistry (IHC) for differentiation between malignant lymphoma and carcinoma. According to high serum PSA level, a PSA staining was also suggested and performed. IHC results showed positivity for CK (Cytokeratin) and PSA, but negativity for CK7, CK20, and LCA (Leukocyte Common Antigen) in favor of metastatic carcinoma to the colon of prostate origin (Figure 1). In the recent follow-up after 5 years, we found that, then the biopsy from the prostate had shown adenocarcinoma (Figure 2). The patient had not been received any chemotherapy. Unfortunately, he had passed away after a short course of conservative therapy. Written informed consent was obtained from the patient for the case report after colon biopsy.

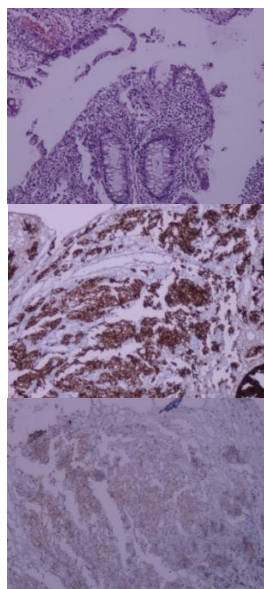


Figure 1. Metastatic adenocarcinoma of prostatic origin to colon mucosa. A) Hematoxylin-Eosin stain, B) IHC for CK positivity, C) IHC for PSA positivity. X100 magnifications

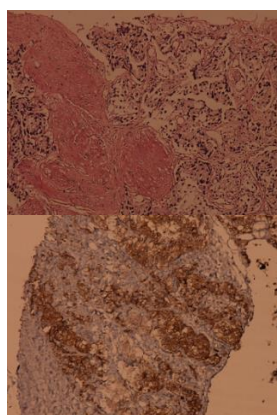


Figure 2. Adenocarcinoma of prostate A) Hematoxylin-Eosin stain, B) IHC for PSA positivity, X100 magnifications

Discussion

Gastric metastasis of prostatic malignancy is rare in the literature (8). The incidence is about 1-4% in autopsy series (7). Bowrey DJ *et al.*, (10) found that Infiltration of the rectosigmoid occurs in 4% of patients with prostatic adenocarcinoma. Differentiation between primary and secondary colorectal malignancies is very difficult mainly on colonoscopy examination (11). Constipation, abdominal pain, rectal bleeding, and diarrhea are the most frequent presentations (12,13). The dark stool is a common presenting sign in literature, the same as the present case (8,9). Metastasis culminates in a poor prognosis with a median survival of 1-3 years (8). Bone metastasis is present in more than 80% of postmortem examinations (8), as our case showed to have bone metastasis on imaging. In our case, colon wall thickness on the CT scan mimicked primary adenocarcinoma or lymphoma. Likewise, other case reports had the same findings (12,14-16). Anemia may be due to bone marrow involvement (8), the same as our presented case. In a similar fashion, elevated serum PSA levels were also seen in other reports (7,11,15-18), while other studies had normal or slightly increased PSA levels (12,14,19,20).

Both prostate and colorectal adenocarcinomas show similarities in cytology or architecture including nuclear pleomorphism and prominent nucleoli or differentiation from well to poor-formed glands (11). In our IHC, negativity for LCA ruled out malignant lymphoma. Negativity for CK20 ruled out primary adenocarcinoma of the colon. CK7 and CK20 negativity along with CK and PSA positivity ruled out other primary sites and confirmed the prostatic origin of carcinoma. Other case reports with similar presentations had the same results for negative CK7 and CK20 and positive PSA (6,7,9,11-13, 15-17,19,21,22). Meanwhile, other studies showed negative results for PSA (12) and positive CK7 (14).

Despite its rare nature, prostate adenocarcinoma may lead to metastases to the GI tract and colon. It can mimic the signs and symptoms of primary colon cancer and result in misdiagnosis. It is important not to make a definite diagnosis of primary carcinoma immediately and to always consider all signs and symptoms of the patient as a whole. Knowing the possibility of metastasis of prostate adenocarcinoma to the GI tract will help in making differential diagnoses and guiding clinicians in making final diagnoses. Using IHC staining for PSA in the presented case with attention to history and laboratory results led us to the final correct diagnosis as it is crucial for starting proper treatment for the individuals; since it

has different management in metastatic prostate cancer compared with primary colon cancer.

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References

1. Rawla P. Epidemiology of prostate cancer. *World J Oncol* 2019;10:63.
2. Kabeer MA, Lloyd-Davies E, Maskell G, Hohle R, Mathew J. Metastatic prostate cancer masquerading clinically and radiologically as a primary caecal carcinoma. *World J Surg Oncol* 2007;5:1-4.
3. Cabarkapa S, Perera M, McGrath S, Lawrentschuk N. Prostate cancer screening with prostate-specific antigen: A guide to the guidelines. *Prostate Int* 2016;4:125-9.
4. Gandaglia G, Abdollah F, Schiffmann J, Trudeau V, Shariat SF, Kim SP, et al. Distribution of metastatic sites in patients with prostate cancer: a population-based analysis. *Prostate* 2014;74:210-6.
5. Bubendorf L, Schöpfer A, Wagner U, Sauter G, Moch H, Willi N, et al. Metastatic patterns of prostate cancer: an autopsy study of 1,589 patients. *Hum Pathol* 2000;31:578-83.
6. Tjarks BJ, Muirhead D. Metastatic adenocarcinoma of the prostate diagnosed in a colon polyp: A unique clinicopathologic scenario. *S D Med* 2016;69 309-11.
7. Patel H, Kumar A, Shaaban H, Nguyen N, Baddoura W, Maroules M, Shaikh S. Synchronous metastasis of prostate adenocarcinoma to the stomach and colon: a case report. *N Am J Med Sci* 2014;6:152.
8. Soe AM, Bordia S, Xiao PQ, Lopez-Morra H, Tejada J, Atluri S, Krishnaiah M. A rare presentation of metastasis of prostate adenocarcinoma to the stomach and rectum. *J Gastric Cancer* 2014;14:271-4.
9. Rodriguez P, Khoshbin K, Vakil J, Deenadayalan V, Turk E. Metastatic prostate adenocarcinoma: A rare presentation. *Cureus*. 2022;14:e21292.
10. Bowrey DJ, Otter MI, Billings PJ. Rectal infiltration by prostatic adenocarcinoma: report on six patients and review of the literature. *Ann R Coll Surg Engl* 2003;85:382.
11. Chua Jr AV, Chu ACS, Tawasil AA, San Juan MD. Metastatic prostate cancer mimicking a rectal cancer: a case report. *Ecancermedicalscience* 2021;15:1-8.
12. Keating S, Imtiaz A, Nahum K, Prasad A, Cheriya P. An interesting case of prostate cancer presenting with colonic metastasis. *Cureus* 2023;15:e34602.
13. Then EO, Nutakki S, Ofosu A, Saleem S, Gayam V, Sunkara T, Gaduputi V. An unlikely culprit: Gastric metastasis from primary prostatic adenocarcinoma. *J Gastrointest Cancer* 2020;51:1081-3.
14. Tunio MA, Agamy AM, Fenn N, Hanratty D, Williams NW. An unusual delayed rectal metastasis from prostate cancer masquerading as primary rectal cancer. *Int J Surg Case Rep* 2022;100:107732.
15. Takayoshi F, Masatoshi S, Yu S. Colorectal metastasis of prostate cancer diagnosed by colonoscopy: a case report. *Gastroenterol Endosc* 2009;51:2897.
16. Liu ZH, Li C, Kang L, Zhou ZY, Situ S, Wang JP. Prostate cancer incorrectly diagnosed as a rectal tumor: A case report. *Oncol Lett* 2015;9:2647-50.
17. Uwagbale E, Onukogu I, Bodiwala V, Agbroko S, Sonpal N. Metastatic prostate cancer presenting as a rectal polyp: A rare occurrence. *Cureus* 2021;13:e15115.
18. Dulskas A, Cereska V, Zurauskas E, Stratilaitovas E, Jankevicius F. Prostate cancer solitary metastasis to anal canal: case report and review of literature. *BMC Cancer* 2019;19:1-6.
19. Lopez C, Mendez V, Nakanishi Y, Affronti JP. Prostate metastasis presenting as primary colon cancer: 1519. *Am J Gastroenterol* 2018;113:S873-S4.
20. Yoon G, Han MH, Seo AN. Rectal invasion by prostatic adenocarcinoma that was initially diagnosed in a rectal polyp on colonoscopy. *J Pathol Transl Med* 2019;53:266-9.
21. Lobo M, Collins V, Crawford B, Nakanishi Y. Mucosal metastasis of prostate adenocarcinoma presenting as a colon polyp found at 15 years after radical prostatectomy: A case report and review of the literature. *Am J Clin Pathol* 2018;150:S42-S3.
22. Hamada Y, Ikenoyama Y, Baba Y, Horiki N, Tanaka K. Solitary rectal metastasis of prostate cancer resembling primary colorectal cancer. *JGH Open* 2021;5:1216-7.