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Editorial Board Member of *World Journal of Radiology*, Roberto Grassi, MD, Professor, Chief, Department of Radiology, University of Campania Luigi Vanvitelli, Napoli, 80138, Italy. roberto.grassi@unicampania.it

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CASE REPORT

Secondary rectal linitis plastica caused by prostatic adenocarcinoma - magnetic resonance imaging findings and dissemination pathways: A case report

Andres Antonio Labra, Giancarlo Schiappacasse, Rolando Alfonso Cocio, Jorge Tomás Torres, Fernando Omar González, Joaquin Alberto Cristi, Marcela Schultz

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Andres Antonio Labra, Giancarlo Schiappacasse, Rolando Alfonso Cocio, Jorge Tomás Torres, Fernando Omar González, Joaquin Alberto Cristi, Department of Radiology, Facultad de Medicina Clínica Alemana-Universidad del Desarrollo, Santiago 7650568, Región Metropolitana, Chile

Marcela Schultz, Department of Pathology, Clínica Alemana de Santiago, Santiago 7650568, Región Metropolitana, Chile

Corresponding author: Jorge Tomás Torres, MD, Department of Radiology, Facultad de Medicina Clínica Alemana-Universidad del Desarrollo, Av. Vitacura 5951, Vitacura, Santiago 7650568, Región Metropolitana, Chile. jttorres@alemana.cl

Abstract

BACKGROUND

Secondary rectal linitis plastica (RLP) from prostatic adenocarcinoma is a rare and poorly understood form of metastatic spread, characterized by a desmoplastic response and concentric rectal wall infiltration with mucosal preservation. This complicates endoscopic diagnosis and can mimic gastrointestinal malignancies. This case series underscores the critical role of magnetic resonance imaging (MRI) in identifying the distinct imaging features of RLP and highlights the importance of considering this condition in the differential diagnosis of patients with a history of prostate cancer.

CASE SUMMARY

Three patients with secondary RLP due to prostatic adenocarcinoma presented with varied clinical features. The first patient, a 76-year-old man with advanced prostate cancer, had rectal pain and incontinence. MRI showed diffuse prostatic invasion and significant rectal wall thickening with a characteristic "target sign" pattern. The second, a 57-year-old asymptomatic man with elevated prostate-specific antigen levels and a history of prostate cancer exhibited rectoprostatic angle involvement and rectal wall thickening on MRI, with positron emission tomography/computed tomography PSMA confirming the prostatic origin of the metastatic spread. The third patient, an 80-year-old post-radical prostatectomy, presented with refractory constipation. MRI revealed a neoplastic mass infiltrating the rectal wall. In all cases, MRI consistently showed stratified thickening,

concentric signal changes, restricted diffusion, and contrast enhancement, which were essential for diagnosing secondary RLP. Biopsies confirmed the prostatic origin of the neoplastic involvement in the rectum.

CONCLUSION
Recognizing MRI findings of secondary RLP is essential for accurate diagnosis and management in prostate cancer patients.

Key Words: Rectal linitis plastica; Prostatic adenocarcinoma; Signet ring cell carcinoma; Metastatic spread; Magnetic resonance imaging; Concentric wall infiltration; Case report

Core Tip: This study presents three cases of secondary rectal linitis plastica (RLP) due to prostate cancer, emphasizing the rarity and diagnostic challenges of this condition. The preservation of mucosa in RLP complicates endoscopic detection, making magnetic resonance imaging (MRI) crucial for early, accurate diagnosis. MRI findings, including stratified parietal thickening, restricted diffusion, and contrast enhancement, are pivotal in identifying RLP. Recognizing these patterns is essential for timely and appropriate management of metastatic rectal involvement, highlighting the need to consider RLP in patients with a history of prostate cancer.

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INTRODUCTION

Linitis plastica involves circumferential tumor infiltration of a hollow organ, which generates a desmoplastic reaction, causing stiffness and retraction of its walls[1,2]. The stomach is the most frequently affected organ; however, the small intestine, colon, and rectum can also be invaded[3,4]. The radiological expression of rectal linitis plastica (RLP) is less well known and can be confused with other etiologies, mainly of infectious or actinic inflammatory origin[5].

Secondary RLP caused by prostate neoplasia is a rare form of dissemination and has been poorly reported in the literature[4]. Histologically, it is characterized by an exuberant desmoplastic response, with concentric tumor infiltration of the submucosal, muscular, and subserosal layers, with the integrity of the mucosa[5], resulting in the normal anatomy becoming more pronounced, which has been described *via* magnetic resonance (MR) imaging (MRI) as concentric wall thickening, determining the "target sign" (Figure 1). The preservation of the rectal mucosa complicates its endoscopic diagnosis since epithelial lesions suggesting parietal involvement are not usually identified or are of minimal magnitude [6,7] (Figure 2).

The diagnosis is particularly challenging because these patients are often referred for MRI with a presumptive diagnosis of either inflammatory rectal disease or prostate cancer, leading to an MRI protocol tailored to these conditions. Moreover, diffuse involvement of the rectal layers may be easily overlooked if the referral lacks a precise differential diagnosis. Therefore, recognizing the characteristic MRI findings and understanding the pathways of metastasis from the prostate to the rectum are fundamental to guiding early and accurate diagnosis of RLP, directing therapeutic management to the appropriate stage of secondary pelvic involvement.

Here, we report 3 cases of rectal neoplastic dissemination of the "linitis plastica" type secondary to prostate cancer, which were diagnosed *via* MRI with histological and/or functional confirmation. The objective is to demonstrate the metastatic involvement of the rectum by prostate cancer, with emphasis on the imaging findings on MRI and its routes of dissemination.

CASE PRESENTATION

Chief complaints

Patient 1: A 76-year-old man presented with rectal pain and fecal incontinence.

Patient 2: A 57-year-old asymptomatic man was found to have elevated prostate-specific antigen (PSA) levels during routine follow-up.

Patient 3: An 80-year-old man presented with refractory constipation.

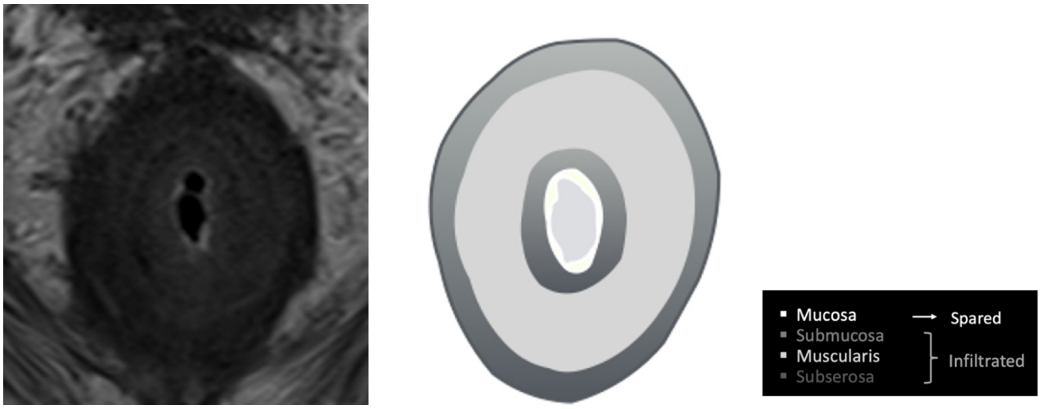

Figure 1 Illustration depicting the concentric "target-like" involvement of the rectal parietal wall due to secondary linitis plastica, with preservation of the mucosa.

Figure 2 The sigmoidoscopy reveals a narrowing of the rectal lumen accompanied by non-ulcerated underlying mucosa. The preserved mucosa complicates endoscopic detection, emphasizing the importance of radiological evaluation for accurate diagnosis.

History of present illness

Patient 1: He reported persistent rectal pain and new-onset fecal incontinence.

Patient 2: He presented with no symptoms.

Patient 3: He developed refractory constipation after initial management.

History of past illness

Patient 1: The patient had been diagnosed with locally advanced prostate cancer with a Gleason score of 5 + 3 and was receiving hormone therapy.

Patient 2: The patient had a history of prostate cancer and was diagnosed *via* systematic transrectal biopsy (Gleason score of 4 + 3).

Patient 3: The patient had undergone radical prostatectomy and lymphadenectomy for prostate cancer 12 years prior (Gleason score of 4 + 3).

Physical examination

Patient 1: The physical examination revealed a hard prostate that was adherent to adjacent tissues.

Patient 2: Physical examination did not reveal any abnormal findings.

Patient 3: Physical examination revealed a 3 cm nodule in the right lobe.

Laboratory examinations

Patient 1: A laboratory study revealed a PSA level of 8.4 ng/mL, with no other relevant findings.

Patient 2: The PSA level was significantly elevated at 100 ng/mL.

Patient 3: Laboratory examination details were not available.

Imaging examinations

Patient 1: An MRI of the prostate revealed diffuse neoplastic involvement of the prostatic parenchyma in both the peripheral and transitional zones. The images revealed poorly defined hypointense areas in the T2 sequence, restricted diffusion in diffusion-weighted imaging (DWI), and early enhancement in the inferior vena cava (IVC) study. Additionally, significantly stratified parietal thickening of the rectal wall was observed, with concentric areas of intermediate signal intensity in the T2 sequence, restricted diffusion in DWI, and contrast enhancement in the IVC study, involving both the submucosal and muscular planes. (Figure 3 and Figure 4).

Patient 2: MRI revealed diffuse neoplastic involvement of the prostatic parenchyma in both the transitional and peripheral zones, with poorly defined hypointense areas in the T2 sequence, restricted diffusion in DWI, and early enhancement in the IVC study. Notably, there was involvement of the rectoprostatic angles, infiltration of the right neurovascular complex, and extension to the rectal wall, characterized by stratified parietal thickening, concentric areas of intermediate signal intensity in the T2 sequence, restricted diffusion in DWI, and contrast enhancement in the IVC study, involving both the submucosal, muscular, and subserosal planes, suggestive of a "linitis plastica" pattern (Figure 5 and Figure 6). Positron emission tomography/computed tomography (PET/CT) PSMA confirmed the prostatic origin of neoplastic infiltration with significant uptake of the radiotracer at the rectal level (Figure 7).

Patient 3: MRI revealed changes following radical prostatectomy, highlighting a neoplastic mass located at the vesicourethral anastomosis, infiltrating the floor of the bladder wall, and locally extending to the rectal wall with concentric neoplastic involvement suggestive of a "linitis plastica" pattern, with areas of intermediate signal intensity in the T2 sequence, restricted diffusion in DWI, and stratified enhancement in the IVC study (Figure 8).

FINAL DIAGNOSIS

Patient 1

To confirm the diagnosis, a colonoscopy was performed, revealing a reduced lumen, increased consistency, and loss of parietal elasticity, as well as incipient involvement of the mucosa. Biopsies were performed, confirming neoplastic involvement of the large intestine wall due to prostatic adenocarcinoma (Figure 9).

Patient 2

Biopsy confirmed secondary RLP due to prostatic adenocarcinoma.

Patient 3

Endoscopic biopsy confirmed the presence of poorly differentiated neoplastic infiltrates compatible with prostatic origin.

TREATMENT

The specific treatment details were not available at the time of reporting.

OUTCOME AND FOLLOW-UP

Outcome and follow-up details were not available at the time of reporting.

DISCUSSION

Secondary infiltration of the rectum with a "linitis plastica" pattern is uncommon, and most publications are case reports [8-10]. A pattern of concentric rings or a "bull's-eye sign" is observed in T2-, T1-, and DWI-weighted MR images, as confirmed in the presented cases. This pattern is likely caused by an exaggerated growth of normal anatomy due to the interposition of infiltrating tumor and desmoplastic tissue in the submucosa and around the muscular layer. Some authors have proposed that subserosal involvement may also exist. A consensus exists in most of the cases described in the literature that the mucosa is preserved or that its involvement is not related to the extent of parietal involvement[9-11].

Initially, this radiological pattern was considered exclusive to signet ring cell carcinoma, an advanced stage of a subtype of primary rectal adenocarcinoma[12], which is a very uncommon disease, with an incidence of < 1% among all colorectal malignancies[11,13]. However, it is now known that rectal infiltration can be secondary to metastasis from other pelvic organs, such as the prostate or bladder, and even from the metastasis of gastric, vesicle, and lobular breast carcinomas and, less frequently, to the prostate, as demonstrated in our cases[5-10]. The literature review underscores the

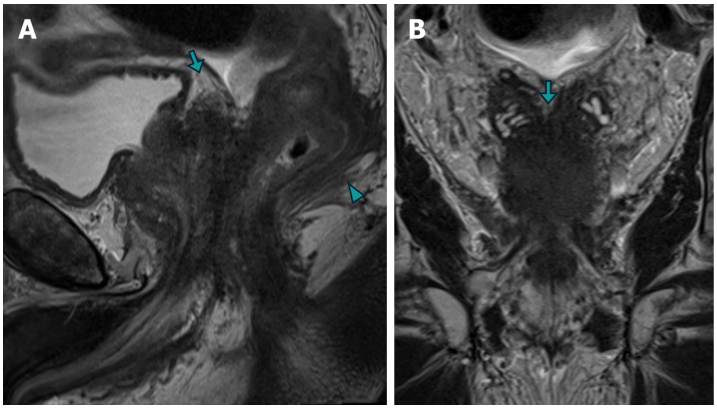

Figure 3 Magnetic resonance imaging images of case 1 demonstrating advanced prostate adenocarcinoma with rectal involvement. A and B: The sagittal (A) and Coronal (B) T2 turbo spin echo images reveal diffuse neoplastic involvement of the prostatic parenchyma, with extension into the rectal wall (arrowhead) and base of the seminal vesicles (arrow).

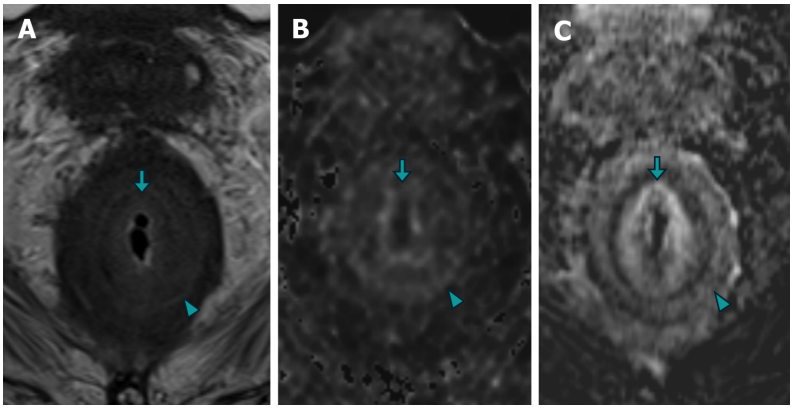

Figure 4 Magnetic resonance imaging images of case 1 demonstrating concentric "target-like" involvement of the rectal parietal wall due to secondary linitis plastica. A: The axial images obtained from T2 turbo spin echo sequence; B: Diffusion-weighted imaging (DWI); C: T1 gradient recalled echo volumetric interpolated breath-hold examination with contrast-enhanced subtraction technique revealed a stratified parietal thickening of the rectal wall. This thickening displayed concentric areas of intermediate signal intensity on T2-weighted images, restricted diffusion on DWI, and enhancement on contrast-enhanced images, affecting both the submucosal (arrow) and muscular (arrowhead) layers.

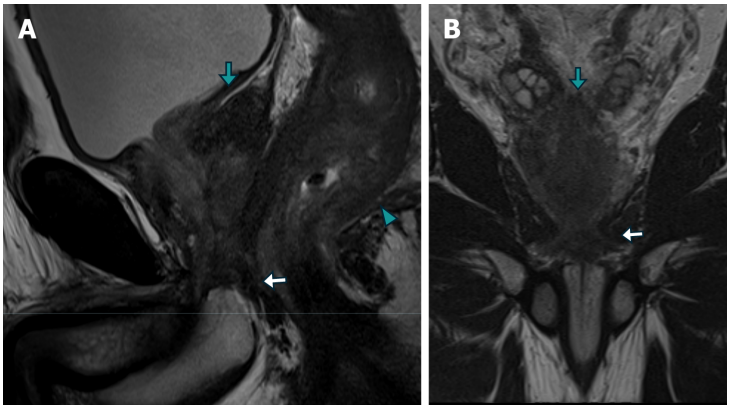

Figure 5 Magnetic resonance imaging images of case 2 demonstrating metastatic prostate adenocarcinoma. A and B: The sagittal (A) and Coronal (B) T2-weighted turbo spin echo images demonstrate diffuse neoplastic involvement of the prostatic parenchyma, with extension to the rectal wall (arrowhead), base of the seminal vesicles (green arrow), and external urethral sphincter (white arrow).

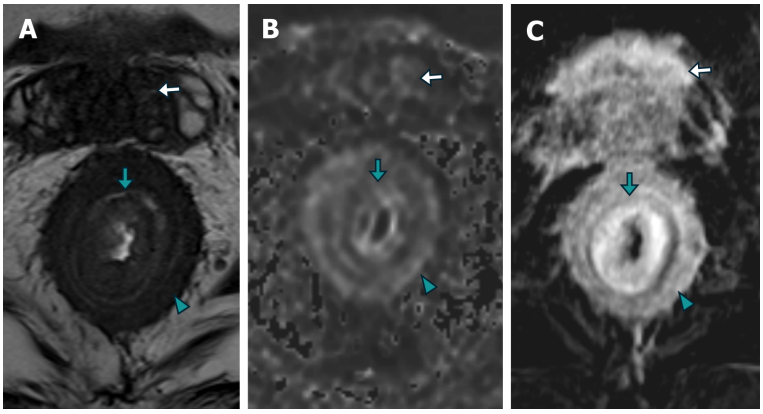

Figure 6 Axial magnetic resonance imaging of case 2. A-C: The imaging findings reveal a stratified parietal thickening of the rectal wall, characterized by concentric areas of intermediate signal intensity on T2-weighted imaging (A), restricted diffusion on diffusion-weighted imaging (B), and contrast enhancement on post-contrast T1-weighted volumetric interpolated breath-hold examination imaging with subtraction (C), affecting both the submucosal (green arrow) and muscular/subserosal planes (arrowhead) resembling a "linitis plastica" appearance. In addition, there is neoplastic involvement of the base of the seminal vesicles (white arrow).

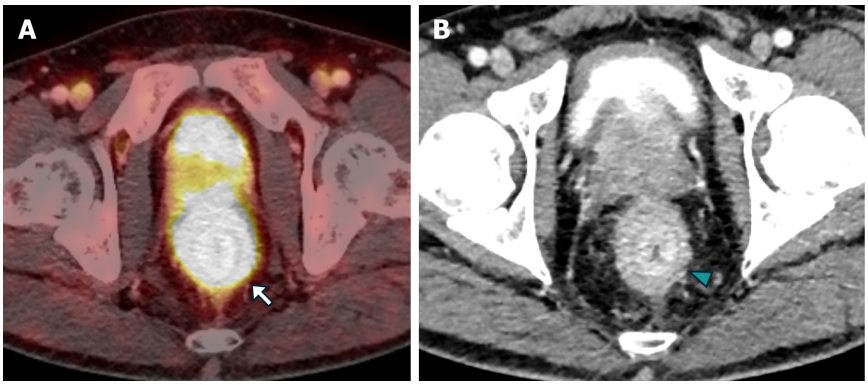

Figure 7 The positron emission tomography/computed tomography PSMA images in case 2. A and B: Axial FUSION (A) and computed tomography (B) of abdomen and pelvis with intravenous contrast revealed a stratified parietal thickening of the rectal wall, displaying significant uptake of the radiotracer, thus confirming the prostatic origin of the neoplastic infiltration (white arrow). Furthermore, concentric impregnation with intravenous contrast (green arrowhead) was also observed.

rarity of this condition, with most reports documenting only a single case. In contrast, our study consolidates the experience of three patients who presented at our center, providing a broader perspective on the clinical and radiological characteristics of secondary RLP caused by prostatic adenocarcinoma. In our series, all patients presented concentric parietal involvement and thickening of the rectal layers, which is compatible with the findings described in the literature.

There are also nonneoplastic causes that can mimic this pattern on MRI, such as inflammatory bowel diseases, infections such as cytomegalovirus, and post-radiation pelvic proctitis. Therefore, although the concentric ring pattern is characteristic of RLP, it is not specific or sensitive and should be interpreted with caution, in accordance with the clinical and histopathological background of the patients[4].

Patients with RLP secondary to prostate cancer can present asymptomatically or may experience abdominal and/or rectal pain, alteration of the intestinal rhythm, or rectal bleeding, so the clinical presentation may be confused with digestive neoplasia and usually includes a lower digestive endoscopy. Endoscopic biopsy, which generally penetrates the mucosa and part of the submucosa, sometimes does not demonstrate the presence of malignancy because the disease usually affects the layers of the submucosa and the muscular propria with preservation of the mucosa, so a diagnostic effort must be made to search for histological confirmation[6]. An example of this is Case No. 1, where the presence of scarce malignant cells in the submucosal plane and some in the mucosal plane confirmed the diagnosis. Analyzing similar case reports, in the study by You *et al*[10], upon suspicion of "linitis plastica" imaging findings and an initial negative endoscopic biopsy, a full-thickness transanal excision biopsy was performed, which confirmed deep rectal involvement secondary to metastatic prostate adenocarcinoma. This highlights the importance of recognizing imaging findings and an adequate interpretation of the clinical background.

The patients varied in age, presented with initial symptoms, and had general conditions. The imaging techniques and pathological findings were consistent across cases in terms of tumor characteristics; however, the extent and pattern of involvement differed. All patients were receiving treatment for prostate cancer, but specific options and management strategies differed on the basis of the stage, extent, and response to prior treatments. This variability in presentation and treatment highlights the need for a tailored approach to patient care. Additionally, the lack of detailed treatment infor-

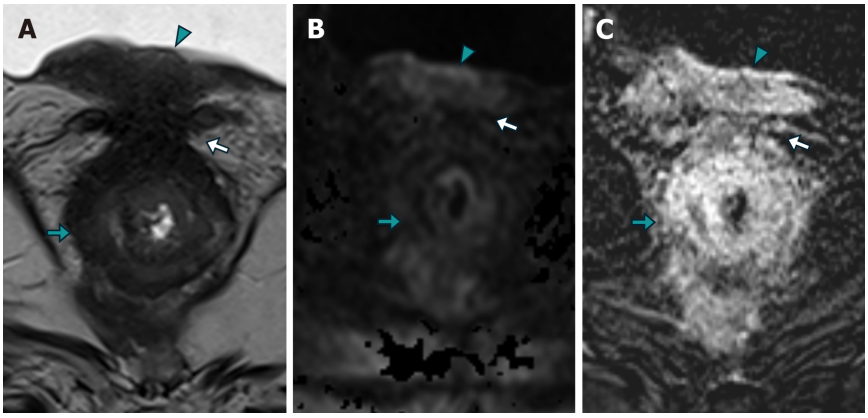

Figure 8 Magnetic resonance imaging findings in case 3. A-C: T2-weighted turbo spin-echo axial imaging (A), diffusion-weighted axial imaging (B), and T1-weighted volumetric interpolated breath-hold examination imaging with contrast-enhanced subtraction (C). The imaging findings revealed a concentric neoplastic involvement of the rectal wall, characterized by areas of intermediate signal intensity on T2-weighted imaging (A), as well as restricted diffusion on diffusion-weighted imaging (correlating with a hypointense region on the apparent diffusion coefficient map, which was not shown; B), and a stratified enhancement pattern on contrast-enhanced imaging (green arrow; C). Notably, the imaging also showed neoplastic involvement of the vesico-rectal plane (white arrow) and the bladder floor wall (green arrowhead).

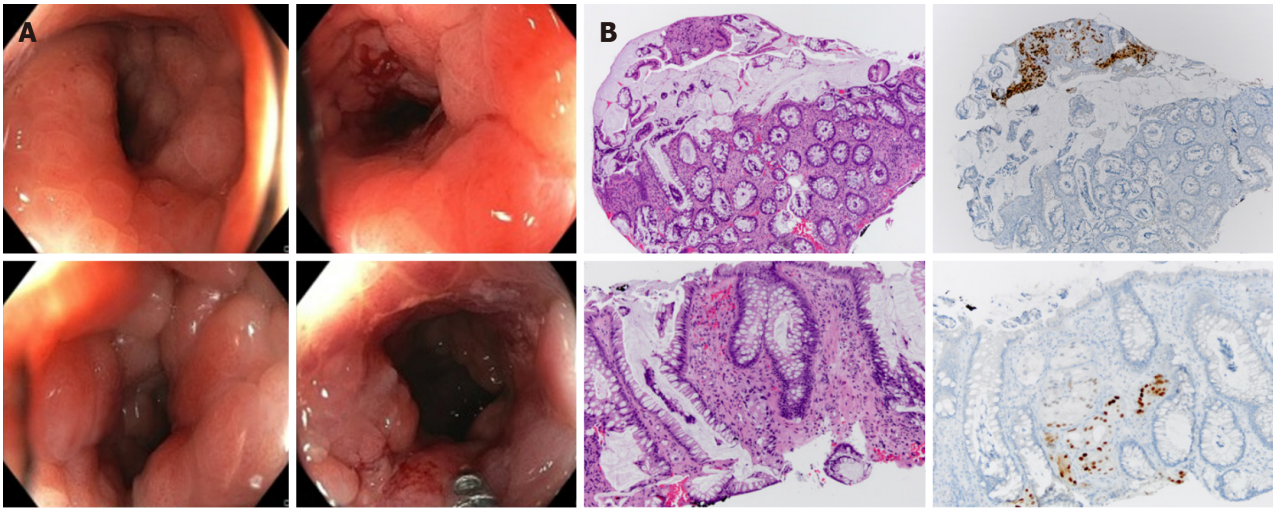

Figure 9 Colonoscopy and histological images of case 1 demostrating advanced metastatic prostate adenocarcinoma. A: Colonoscopy image showing a reduced rectal lumen with congestive mucosa exhibiting increased consistency and loss of elasticity; B: Histological images of metastatic prostate adenocarcinoma utilizing Hematoxylin and Eosin staining in conjunction with immunohistochemical evaluation for the NKX marker. Groups of neoplastic cells arranged in nests and tubular structures. These cells exhibited atypical nuclei with prominent nucleoli and were positive for NKX, a highly specific marker for, albeit not exclusively indicative of, prostate origin.

mation in some cases underscores the importance of understanding the full therapeutic approach for each patient to optimize outcomes.

In relation to the dissemination pathways, three proposed routes exist for cases of adenocarcinoma of the prostate involving the rectum[14] (Figure 10).

Direct extension through the rectoprostatic fascia. Although Denonvilliers' fascia usually prevents the posterior extension of prostate cancer, direct dissemination may occur and is related to unresected advanced tumors. Cases 2 and 3 probably correspond to this type of dissemination.

Retrograde lymphatic/venous dissemination. Since the prostate and rectum share some drainage routes to pelvic lymph node groups and venous drainage, this may constitute the dissemination pathway for patient 1[15].

Neoplastic cells were seeded along the route of needle biopsy in the rectal wall or perirectal tissue. These cases are extremely rare and controversial[16]. However, studies that demonstrate causality are lacking.

Given the rarity of RLP as a metastatic manifestation of prostate adenocarcinoma, early and accurate identification *via* MRI is critical not only for distinguishing this condition from primary gastrointestinal malignancies but also for guiding treatment strategies. Recognizing characteristic imaging patterns, such as concentric wall thickening and the "target sign", enables clinicians to tailor therapeutic interventions, potentially avoiding unnecessary surgical procedures and focusing on targeted therapies. Additionally, these findings provide valuable insights into the likely disease course, allowing for a more informed prognosis. Integrating these radiological insights into a multidisciplinary approach enhances personalized

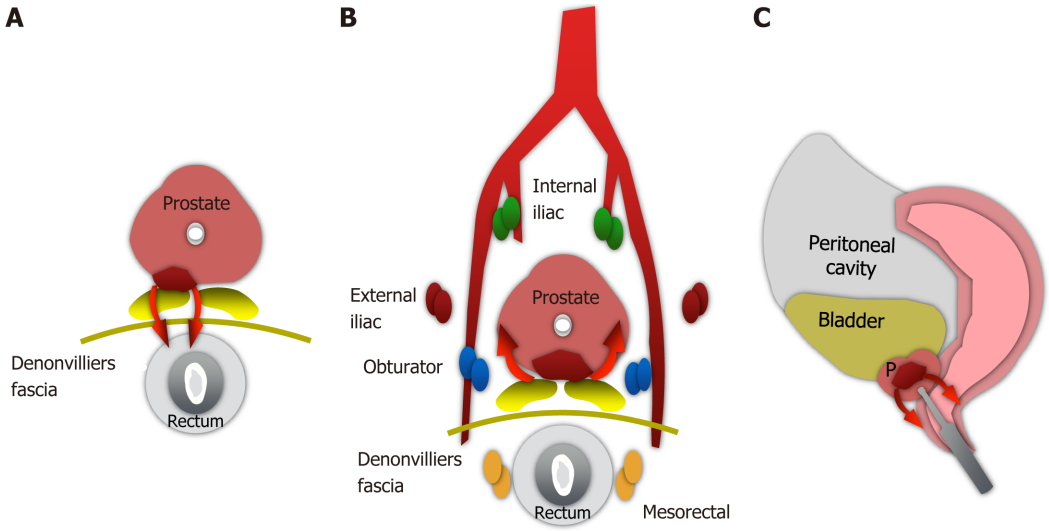

Figure 10 Postulated pathways of prostatic adenocarcinoma metastatic dissemination to the rectum. These include direct extension through the rectoprostatic fascia or Denonvilliers' fascia (A), lymphatic and/or retrograde venous spread (B), and tumoral implantation (C) following transrectal prostate biopsy.

care and ultimately improves outcomes for patients with this complex metastatic disease.

The study acknowledges that the limited number of cases constrains the generalizability of the findings, as the observed clinical presentations, imaging characteristics, and outcomes may not fully capture the broader spectrum of secondary RLP caused by prostatic adenocarcinoma. Additionally, the retrospective nature of the study introduces potential selection bias, as cases were identified and analyzed on the basis of available records, possibly excluding those with atypical presentations or incomplete data. Recognizing these limitations enhances the transparency of the research and underscores the need for future studies with larger cohorts and prospective designs to validate the findings and broaden our understanding of this rare metastatic condition.

As a projection for future research, it is crucial to emphasize the need for larger cohort studies with long-term follow-up of patients with prostatic neoplasia. Such studies could more accurately determine the incidence of RLP and facilitate the development of diagnostic algorithms that recognize this condition as a potential manifestation of prostate cancer dissemination MR. Research aimed at refining imaging techniques or integrating MRI with other modalities, such as PET/CT, could significantly increase diagnostic accuracy and reduce the risk of misdiagnosis. Addressing these areas in future research would build upon the valuable insights presented in this study, ultimately improving patient outcomes and advancing the management of secondary RLP in clinical practice.

CONCLUSION

Metastatic rectal neoplastic dissemination of the "linitis plastica" type is poorly understood and must be included in the dissemination forms of prostate cancer. Owing to the increasing use of MRI in monitoring rectal and prostate neoplasms, it is crucial for radiologists to be aware of and master their manifestations on MRI to perform accurate neoplastic staging. Distinguishing between primary rectal carcinoma and prostate carcinoma metastasis in the rectum is highly important because of the different treatments and prognoses involved. Proper imaging interpretation and immunohistochemical study of biopsies can prevent high-morbidity surgical interventions and direct treatments to therapies adapted to the corresponding dissemination stage.

FOOTNOTES

Author contributions: Labra AA, Schiappacasse G and Cocio RA formulated the objective and designed the structure of this case report; Cocio RA, Torres JT and González FO conducted literature search; Cristi JA and Schultz M analyzed the data and made the figures; Cocio RA and Torres JT wrote the different sections of this manuscripts.

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Country of origin: Chile

ORCID number: Jorge Tomás Torres 0000-0001-8555-0535.

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REFERENCES

1 **Fernet P**, Azar HA, Stout AP. Intramural (tubal) spread of linitis plastica along the alimentary tract. *Gastroenterology* 1965; 48: 419-424 [PMID: 14275076]
2 **Laufman H**, Saphir O. Primary linitis plastica type of carcinoma of the colon. *AMA Arch Surg* 1951; **62**: 79-91 [PMID: 14789350 DOI: 10.1001/archsurg.1951.01250030082009]
3 **Ba-Ssalamah A**, Prokop M, Uffmann M, Pokieser P, Teleky B, Lechner G. Dedicated multidetector CT of the stomach: spectrum of diseases. *Radiographics* 2003; **23**: 625-644 [PMID: 12740465 DOI: 10.1148/rg.233025127]
4 **Mouaqit O**, Mohsine R, Chenna, Ktaibi R, Sergi B, Boubouh A, El Malki O, Ifrine L, Belkouchi A. La linite plastique rectale primitive: une tumeur exceptionnelle. *J Afr Cancer* 2010; **2**: 54-56 [DOI: 10.1007/s12558-009-0051-y]
5 **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**: 2647-2650 [PMID: 26137121 DOI: 10.3892/ol.2015.3100]
6 **Dumontier I**, Roseau G, Palazzo L, Barbier JP, Couturier D. Endoscopic ultrasonography in rectal linitis plastica. *Gastrointest Endosc* 1997; **46**: 532-536 [PMID: 9434221 DOI: 10.1016/s0016-5107(97)70009-9]
7 **Khor V**, Khairul-Asri MG, Fahmy O, Hamid SA, Lee CKS. Linitis plastica of the rectum secondary to metastatic prostate cancer: A case report of a rare presentation and literature review. *Urol Ann* 2021; **13**: 442-445 [PMID: 34759661 DOI: 10.4103/UA.UA_188_20]
8 **Mommersteeg MC**, Kies DA, van der Laan J, Wonders J. Linitis plastica of the rectum secondary to prostate carcinoma. *BMJ Case Rep* 2022; **15** [PMID: 36460309 DOI: 10.1136/bcr-2021-248462]
9 **Schmeusser B**, Wiedemer J, Fichtenbaum E. Linitis prostatica: A unique case of circumferential narrowing of the rectum. *J Clin Images Med Case Rep* 2022; **3**: 2122 [DOI: 10.52768/2766-7820/2122]
10 **You JH**, Song JS, Jang KY, Lee MR. Computed tomography and magnetic resonance imaging findings of metastatic rectal linitis plastica from prostate cancer: A case report and review of literature. *World J Clin Cases* 2018; **6**: 554-558 [PMID: 30397613 DOI: 10.12998/wjcc.v6.i12.554]
11 **Rudralingam V**, Dobson MJ, Pitt M, Stewart DJ, Hearn A, Susnerwala S. MR imaging of linitis plastica of the rectum. *AJR Am J Roentgenol* 2003; **181**: 428-430 [PMID: 12876021 DOI: 10.2214/ajr.181.2.1810428]
12 **Nguyen MD**, Plasil B, Wen P, Frankel WL. Mucin profiles in signet-ring cell carcinoma. *Arch Pathol Lab Med* 2006; **130**: 799-804 [PMID: 16740030 DOI: 10.5858/2006-130-799-MPISCC]
13 **Burgain C**, Germain A, Bastien C, Orry X, Choné L, Claudon M, Laurent V. Computed tomography features of gastrointestinal linitis plastica: spectrum of findings in early and delayed phase imaging. *Abdom Radiol (NY)* 2016; **41**: 1370-1377 [PMID: 26814502 DOI: 10.1007/s00261-016-0652-8]
14 **Barbosa FG**, Queiroz MA, Nunes RF, Viana PCC, Marin JFG, Cerri GG, Buchpiguel CA. Revisiting Prostate Cancer Recurrence with PSMA PET: Atlas of Typical and Atypical Patterns of Spread. *Radiographics* 2019; **39**: 186-212 [PMID: 30620699 DOI: 10.1148/rg.2019180079]
15 **Murray SK**, Breau RH, Guha AK, Gupta R. Spread of prostate carcinoma to the perirectal lymph node basin: analysis of 112 rectal resections over a 10-year span for primary rectal adenocarcinoma. *Am J Surg Pathol* 2004; **28**: 1154-1162 [PMID: 15316314 DOI: 10.1097/01.pas.0000131543.80147.3d]
16 **Vaghefi H**, Magi-Galluzzi C, Klein EA. Local recurrence of prostate cancer in rectal submucosa after transrectal needle biopsy and radical prostatectomy. *Urology* 2005; **66**: 881 [PMID: 16230172 DOI: 10.1016/j.urology.2005.04.005]

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