



VCU

Virginia Commonwealth University
VCU Scholars Compass

Graduate Medical Education (GME) Resident
and Fellow Research Day Posters

VCU Health

2020

Seminal Vesicle Adherent to Rectal Wall Following Neoadjuvant Chemoradiotherapy: A Potential False-Positive Diagnostic Pitfall

Samia Liaquat
VCUhealth

Michael O. Idowu
Virginia Commonwealth University

Bryce Hatfield
Virginia Commonwealth University

Follow this and additional works at: https://scholarscompass.vcu.edu/gme_posters



Part of the [Medicine and Health Sciences Commons](#)

© The Author

Downloaded from

https://scholarscompass.vcu.edu/gme_posters/16

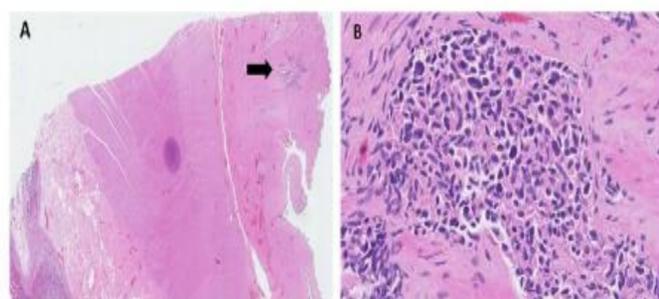
This Clinical Case Reports is brought to you for free and open access by the VCU Health at VCU Scholars Compass. It has been accepted for inclusion in Graduate Medical Education (GME) Resident and Fellow Research Day Posters by an authorized administrator of VCU Scholars Compass. For more information, please contact libcompass@vcu.edu.

Seminal Vesicle Adherent to Rectal Wall Following Neoadjuvant Chemoradiotherapy: A Potential False-Positive Diagnostic Pitfall.

Samia Liaquat, MD , Michael O. Idowu, MD, and Bryce S. Hatfield, MD

Abstract:

The standard of care for stage T3 and stage T4 rectal adenocarcinomas involves neoadjuvant chemoradiotherapy followed by either low anterior resection or abdominopelvic resection. The presence of residual adenocarcinoma or positive surgical margins provides useful prognostic information and can influence ongoing adjuvant therapy. Although uncommon, mimics of treated adenocarcinoma may be present in the surgical specimen. A high index of suspicion is critical in avoiding potential false-positive pitfall, and the exclusion of mimics of treated adenocarcinoma is paramount to accurate diagnosis and treatment. Seminal vesicle epithelium has long been a challenge in differentiating prostatic adenocarcinoma from benign epithelium. However, the role of incidental seminal vesiculectomy in rectal resections due to fibrous adhesion to rectal wall secondary to chemoradiation has not been studied. As the seminal vesicle epithelium can show markedly atypical nuclei with radiation-type effect at baseline, the potential risk of misinterpretation as residual adenocarcinoma is high. In this article, we present 2 case reports of rectal adenocarcinoma treated with neoadjuvant chemoradiotherapy followed by transabdominal resection (low anterior resection or abdominopelvic resection) with incidental seminal vesiculectomies mimicking either residual adenocarcinoma or residual adenocarcinoma at a margin of resection.



Case #1

The first patient is a 63-year-old male with a history of prior LAR at an outside hospital for rectal adenocarcinoma reportedly involving the rectosigmoid junction and invading into, but not through, the muscularis propria (pT2) the previous year. A total of 12 lymph nodes were resected and reported as negative (pN0), and all surgical margins were negative for carcinoma. Testing for mismatch repair proteins showed intact expression for MLH1, MSH2, MSH6, and PMS2. The patient did not receive neoadjuvant or adjuvant CRT as a result of this initial diagnosis, which is in keeping with the National Comprehensive Cancer Network guidelines for pT2 rectal carcinoma. Eleven months later, the patient presented with a 2-cm mass at the anastomotic site on surveillance colonoscopy. A biopsy of the mass demonstrated recurrent adenocarcinoma, and the patient was referred to our institution for surgical resection. Clinical restaging showed no evidence of metastatic disease, and the patient was treated with 6 weeks of preoperative 5-fluorouracil-based CRT to a total dose of 50.4 Gy, followed by an APR. Grossly, no residual tumor was identified. On microscopic examination, only a small focus of atypical glandular tissue was noted in the wall of the rectum (Figure 1A, arrow). Microscopic examination at higher power revealed irregular, branching, cleftlike glandular lumina outside the muscularis propria. The glandular cells contained atypical cells with dark nuclei and occasional intranuclear inclusions, and scant golden-brown pigment, surrounded by fibromuscular stroma (Figure 1B). Significant cautery artifact was present. On immunohistochemistry, the atypical glandular epithelium was negative for CDX2 (Figure 1C) and CK20 (Figure 1D), and positive for CD10 (Figure 1E) and p63 (Figure 1F). Overall, the morphologic and immunohistochemical features were consistent with seminal vesicle epithelium rather than residual adenocarcinoma.

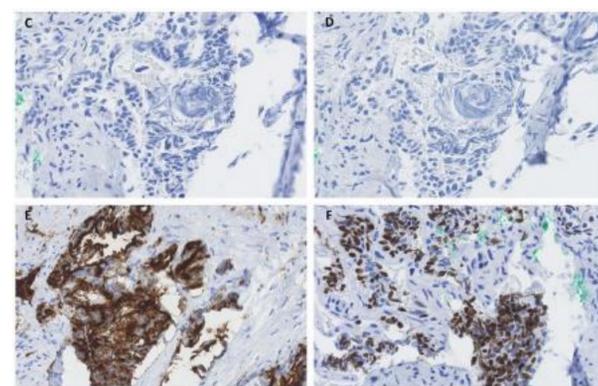


Figure 1. (A) Seminal vesicle attached to the wall of the rectum (arrow; hematoxylin-eosin [H&E], 20×). (B) High-power view showing the seminal vesicle glandular epithelium with enlarged, hyperchromatic nuclei and adjacent fibromuscular stroma (H&E, 400×). There was no staining for (C) CDX2 (CDX2, 400×) or (D) CK20 (CK20, 400×). The seminal vesicle epithelium showed positive staining for (E) CD10 (CD10, 400×) and (F) p63 (p63; 400×).

Case #2

The second case is a 60-year-old male who presented with rectal bleeding and an elevated CEA of 32.6 ng/mL. A diagnostic colonoscopy revealed a 3 cm circumferential, ulcerated rectal mass 4 cm from anal verge. A biopsy showed moderately differentiated rectal adenocarcinoma. Clinical staging did not reveal any evidence of metastatic disease. On magnetic resonance imaging, the rectal mass penetrated <5 mm beyond the muscularis propria with no definite solid organ invasion and an intact peritoneal reflection. The patient underwent neoadjuvant CRT and LAR. Grossly, a full-thickness ulcerated lesion measuring 1.3 × 0.6 × 0.5 cm was noted in the rectum. Microscopically, residual adenocarcinoma was present invading the muscularis propria. One anastomotic donut contained a separate focus of glandular tissue with irregular lumina, pleomorphic nuclei, prominent nucleoli, and yellow cytoplasmic pigmentation/lipofuscin surrounded by a fibromuscular stroma (Figure 2A and B). The morphology was compatible with seminal vesicle tissue, and the margins were reported as negative.

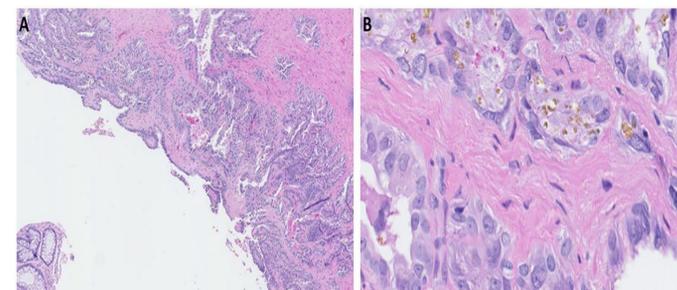


Figure 2. The second case contained a portion of seminal vesicle in the anastomotic donut. (A) At low-power view (hematoxylineosin [H&E], 40×), the seminal vesicle epithelium and surrounding fibromuscular stroma is evident. (B) High-power magnification (H&E, 400×) demonstrates well-formed glands with cytoplasmic golden-brown pigment. The nuclei are large and irregular with prominent nucleoli.

Conclusion

Although the incidence of incidental seminal vesiculectomy in rectal adenocarcinoma excisions treated with CRT is unknown, one should be aware of the possibility in order to discern it from residual tumor. Misdiagnosis of seminal vesicle epithelium in case #1 as adenocarcinoma could have led to the interpretation as partial response as opposed to pathologic complete response (ypT4a), potentially altering the patient's adjuvant therapy. Similarly, in case #2, diagnosis of seminal vesicle as residual adenocarcinoma at the anastomotic site may have led to misguided subsequent surgical re-excision of the margin or additional treatment. In order not to misinterpret seminal vesicle epithelium as residual adenocarcinoma, careful attention to histologic features is paramount. Seminal vesicle epithelium can often be identified using histomorphologic features alone. In equivocal cases, staining for CDX2 and PAX8 can aid in differentiation.