Rectal Adenocarcinoma Presenting as a Perirectal Abscess

Bibek Saha, M.D.[1], Jared Dang, B.S.[2], Melissa Kahili-Heede, M.S.[2], James Grobe, M.D., F.A.C.G[2,3]

[1]Department of Internal Medicine, Mayo Clinic, Rochester, MN, USA, [2]John A. Burns School of Medicine, University of Hawaii at Manoa, Honolulu, HI, USA, [3]The Queen's Medical Center, Honolulu, HI, USA

ABSTRACT

INTRODUCTION

Colorectal cancer (CRC) is the third leading cause of cancer-related mortality. Despite excellent screening efforts resulting in the decrease of the overall incidence and mortality rate of CRC, the incidence is rising among younger adults. Rectal cancer (RC), specifically, disproportionately affects this younger population. Classic symptoms of RC such as hematochezia, tenesmus, rectal pain, and bowel habit changes are well known but can be non-specific and misdiagnosed. Rare presentations in combination with these conventional symptoms can occur warranting a higher degree of clinical suspicion. Here we report a case of rectal adenocarcinoma (RA) presenting as a perirectal abscess.

CASE DESCRIPTION/METHODS

A 52-year-old male with uncontrolled type 2 diabetes presented with a 5-day history of fatigue, subjective fever as well as swelling and cramping pain around the left buttocks. In addition to weight loss, he reported a 2-2.5 year and two-month history of rectal bleeding and changes in bowel habits, respectively, which were attributed to other conditions including hemorrhoids and IBS. He had never undergone a colonoscopy. On exam, the patient was afebrile (36.1˚ C), tachycardic (110bpm), hypotensive (83/55mmHg), and tachypneic (20breaths/min). His left buttock was swollen, indurated, and tender on palpation but there was no gross fluctuance or crepitus. WBC count (33.6 × 10^9/L), and lactate (4.2mmol/L) were elevated suggesting severe sepsis. CT abdomen/pelvis and examination in the OR for suspected, and subsequently confirmed, Fournier's gangrene and perirectal abscess led to the discovery of a RA (final: pT4N0M0, stage IIB/C). Management included surgical debridements, antibiotic therapy, neoadjuvant chemoradiation, and abdominoperineal resection. He remains in remission with a stable CEA level and unremarkable follow-up colonoscopies.

DISCUSSION

While uncommon, RC disproportionately affects younger patients where the annual incidence has increased by 2.1% in this group. The conventional presentation of RC may be attributed to a different condition, especially in younger patients, delaying diagnostic colonoscopy and treatment. In the literature, 4 cases of RA presenting as perirectal abscess in adults have been described where two patients were 45 years old or younger. In all cases, the perirectal abscess was diagnosed before or concurrently with the RA. Taken together, perirectal abscess, especially if present in conjunction with classic RC symptomology, may necessitate the workup of RC.

INTRODUCTION

- Colorectal cancer (CRC) demonstrates the third highest cancer-related incidence in both males and females in the US [1,2]
- Despite excellent screening efforts resulting in the decrease of the overall incidence and mortality rate of CRC in the US over the last few decades, the CRC incidence is rising at an alarming rate among adolescents and young adults [1,2]
- Rectal cancer (RC), specifically, is the second most common CRC contributing to 28% of cases [3]
- While classic symptoms of rectal adenocarcinoma (RA) such as hematochezia, tenesmus, cramping rectal or pelvic pain, and changes in bowel habits are well known, these symptoms may be non-specific and be present in other conditions [3,4]
- Rare presentations in addition to these classic symptoms can occur warranting a higher degree of clinical suspicion and associated workup
- Here we present a case report of RA presenting as a perirectal abscess

CASE DESCRIPTION

History:

- A 52-year-old male with uncontrolled insulin dependent type 2 diabetes mellitus (DM2) presented to the Emergency Department with a 5-day history of generalized weakness, fatigue, subjective fever as well as redness, swelling and a cramping pain around the left buttocks
- In addition to unintentional weight loss, he reported a 2-2.5 year and two-month history of rectal bleeding and changes in bowel habits, respectively, which were attributed to other conditions including hemorrhoids and IBS
- Non-smoker with no prior colonoscopies and no significant family history

Physical Exam:

- Afebrile (36.1 ˚ C), tachycardic (110 bpm), hypotensive (83/55 mmHg), tachypneic (20 breaths/min)
- His left buttock was swollen, indurated and tender on palpation but with no gross fluctuance or crepitus

Diagnostics:

- WBC count (33.6 × 10^9/L), anion gap (26 mEq/L), and lactate (4.2 mmol/L) were elevated suggesting severe sepsis
- Other pertinent labs included a decreased hemoglobin (10.9 g/dL) and MCV (74 fL) as well as an increased RDW (14.6 %), blood glucose level (667 mg/dL) and HbA1c (12.6 %)

CASE DESCRIPTION

Diagnostics:

- CT abdomen/pelvis showed a mass-like rectal wall thickening, as well as left perirectal fat stranding with foci of air in the left perirectal soft tissues
- Debridement in the OR revealed a large left perirectal abscess and extensive necrotic/gangrenous tissue, confirming the diagnosis of Fournier's gangrene
- A rectal exam at this time revealed a friable mass 5cm from the anal verge which was found to be a moderately differentiated RA (final grade/stage was pT4N0M0/stage IIB/C)
- The initial CEA was 3.8 ng/mL
- CT chest and MRI pelvis revealed no metastases, but the latter also showed a 7.4 cm x 5 cm x 5 cm rectal mass and multiple perirectal abscesses

Management/Outcomes:

- During the admission, which lasted ~14 weeks, he underwent a total of 10 surgeries/procedures including wound debridement and/or wound closure and a variety of antibiotic regimens
- With resolution of the infection and appropriate wound healing, neoadjuvant therapy with chemotherapy and radiation therapy was started
- Colonoscopy via the stoma: completely obstructing tumor in the rectum and a 35 mm colonic polyp located in the transverse colon where resection was incomplete given its size
- The patient subsequently underwent a triple procedure involving definitive surgical resection of the RA via abdominoperineal resection (APR), removal of the large colonic polyp via a piecemeal fashion, and flap reconstruction
- The patient currently remains in remission

LITERATURE REVIEW

TABLE 1: CHARACTERISTICS OF FIVE CASE REPORTS DETAILING THE UNIQUE RELATIONSHIP BETWEEN RECTAL ADENOCARCINOMA AND PERIRECTAL ABSCESS

Author	Sex (M/F)	Age (Years)	Comorbidities	Classic Symptoms of Rectal Cancer Present (Y/N)	Initial Presentation (Symptoms)	Initial Presentation (PE)	Febrile (Y/N)	Other Vitals & Labs	Necrotic Lesion(s) on PE (Y/N)	Fournier's Gangrene Dx (Y/N)	Perirectal Abscess Dx Before or Concurrently or After RA Dx	Perirectal Abscess and RA Dx During Same Admission (Y/N)	Grade & Stage	Diverting Colostomy (Y/N)	Treatment	Neoadjuvant Therapy (Y/N)	Adjuvant Therapy (Y/N)	Neoadjuvant Therapy/Cancer Resection Performed After Infection Under Control (Y/N)	Radiation Therapy After Wound Healing Complete (Y/N)	Length of Admission (Days)	Prognosis
Gamagami [7]	M	45	Insulin Dependent DM2	N	4 days of pain and purulent discharge from the perianal region	Scrotum, perineum and left ischiorectal regions were erythematous, swollen and had patches of skin necrosis	NS	NS	Y	Y	Before	Y	T3N0M0, Stage IIA	Y	Debridements, Antibiotic Therapy, Hyperbaric Oxygen Therapy, APR and Adjuvant Chemoradiation	N	Y	Y	Y	NS	Remission
Ash [8]	M	33	None	N	2 days of scrotal swelling and pain	Large area of induration as well as an erythematous, swollen, and crepitant scrotum	Y	WBC count normal (10)	N	Y	Before	Y	NS, Stage IV	Y	Debridements, Antibiotic Therapy.	NS	NS	NS	NS	NS	NS
Gupta [9]	M	55	NS	Y	1 week of pain and purulent discharge from perianal region	Massive abscess extending into the right ischiorectal space, scrotum, penis with two large openings that were discharging necrotic tissue. Swelling and induration of this region was also present.	N	HR: 78 bpm, BP: 136/84 mmHg, Elevated WBC count (14.4) and CRP (14.9 mg/dl)	Y	Y	Before	Y	NS	Y	Debridements, Antibiotic Therapy.	NA	NA	NA	NA	21	Deceased after 3 weeks
Yoshino [10]	M	65	None	N	Fatigue and anal pain	A black spot with erythema around the perineal region	N	HR: 92 bpm, BP: 125/58 mmHg, O2 sat 98%, Elevated WBC count (63.2)	Y	Y	Concurrently	Y	T4bN2M0, Stage IIIC	Y	Debridements, Antibiotic Therapy. and a Radical Total Pelvic Exenteration with Sacrectomy	N	Y	Y	Y	108	Recurrence was suspected, patient died after 1 year
Our Case	M	52	Insulin Dependent DM2, HTN, HLD	Y	Weight loss and 5 days of weakness, fatigue, subjective fever as well as redness, swelling and a cramping pain around the left buttocks	Left buttock region was swollen, indurated and tender on palpation but there was no gross fluctuance or crepitus	N	Tachycardic (110 bpm), hypotensive (83/55 mmHg), tachypneic (20 breaths/min), O2 sat of 98%, Elevated WBC count (33.6), procalcitonin (4.57) and lactate (4.2)	N	Y	Before	Y	pT4N0M0, Stage IIB/C	Y	Debridements, Antibiotic therapy, Neoadjuvant chemoradiation, APR	Y	N	Y	Y	99	Remission

DISCUSSION

- RC disproportionately affects younger patients, and unlike in older adults, the annual incidence has increased by 2.1% in this younger group [2,3]
- The conventional presentation of RC may be attributed to a different condition, especially in younger patients, delaying diagnostic colonoscopy and treatment
- Although, abscess is a known rare presentation of colon cancer, we are now reporting abscess, specifically perirectal abscess, as a rare presentation of RC [5-10]
- In the literature (Table 1), 4 cases of RA presenting as perirectal abscess in adults have been described where all patients were male and 2 were ≤ 45 years old
- However, unlike our patient, 3 of the cases did not demonstrate the classic symptoms of RC
- In all cases, the perirectal abscess was diagnosed before or concurrently with the RA

CONCLUSIONS

- Clinicians should have a high degree of suspicion for RA and should consider diagnostic colonoscopy if a male patient with DM2, with/without conventional rectal cancer symptomology presents with signs and symptoms of a perirectal abscess

REFERENCES

1. Marley AR, Nan H. Epidemiology of colorectal cancer. Int J Mol Epidemiol Genet. 2016 Sep 30;7(3):105–14.
2. Levine O, Zbuk K. Colorectal cancer in adolescents and young adults: Defining a growing threat. Pediatr Blood Cancer. 2019 Nov;66(11):e27941.
3. Fazeli MS, Keramati MR. Rectal cancer: a review. Med J Islam Repub Iran. 2015 Jan 31;29:171.
4. Flynn S, Eisenstein S. Inflammatory Bowel Disease Presentation and Diagnosis. Surg Clin North Am. 2019 Dec;99(6):1051–62.
5. Álvarez J, Baldonedo R, Bear I, Álvarez P, Jorge J. Anaerobic liver abscesses as initial presentation of silent colonic cancer. HPB (Oxford). 2004;6(1):41–2.
6. Tsai HL, Hsieh JS, Yu FJ, Wu DC, Chen FM, Huang CJ, et al. Perforated colonic cancer presenting as intra-abdominal abscess. Int J Colorectal Dis. 2007 Jan;22(1):15–9.
7. Gamagami R, Mostafavi M, Gamagami A, Lazorthes F. Fournier's gangrene: An unusual presentation for rectal carcinoma. AMERICAN JOURNAL OF GASTROENTEROLOGY. 1998 Apr;93(4):657–8.
8. Ash L, Hale J. CT findings of perforated rectal carcinoma presenting as Fournier's gangrene in the emergency department. Emerg Radiol. 2005 Jul;11(5):295–7.
9. Gupta P. Rectal cancer presenting as ischio-rectal abscess and Fournier's gangrene - a case report. EUROPEAN REVIEW FOR MEDICAL AND PHARMACOLOGICAL SCIENCES. 2010 Feb;14(2):139–40.
10. Yoshino Y, Funahashi K, Okada R, Miura Y, Suzuki T, Koda T, et al. Severe Fournier's gangrene in a patient with rectal cancer: case report and literature review. WORLD JOURNAL OF SURGICAL ONCOLOGY. 2016 Sep 1;14.