Huge Pain in the Behind: Radiation-Induced Perforation and Bleeding Treated with Hemostatic Spray

Scott Weismiller DO, MS[1], Ronaldo Panganiban MD, PhD[2], John Levenick MD[2], Alison Faust MD, MHS[2]

Division of Internal Medicine[1], Division of Gastroenterology and Hepatology[2], Penn State Health Milton S. Hershey Medical Center, Hershey, PA, USA

Introduction

Lower gastrointestinal bleeding (GIB) has increased from an aging population with more NSAID, anticoagulant, and antiplatelet use.

Radiation is a less common cause, but between 5-30% of irradiated patients experience radiation proctopathy.[1,2]

<1% of patients treated with prostate brachytherapy develop rectal ulcers (0.19%) or fistulas (0.26%).[3]

Hemostatic spray is an inorganic polymer that has limited evidence of efficacy for lower GIB.

To our knowledge, there is no reported use of hemostatic spray to treat an ulcerated rectoprostatic fistula.

Case Description

A 78-year-old man with stage IV rectal adenocarcinoma and history of prostate cancer treated with radiation and brachytherapy 20 years ago presented with 4 weeks of intermittent anorectal pain. A contrast-enhanced CT of the pelvis showed air-fluid collections around the prostate contiguous with the rectum. Flexible sigmoidoscopy showed a large solitary rectal ulcer covered in stool and mucous, not requiring intervention (Image 1).

One month later, he presented with profuse hematochezia. Although hemodynamically stable, his hemoglobin decreased to 10.1 g/dL from 13 g/dL. Repeat flexible sigmoidoscopy showed a large, cratered rectal ulcer with adherent clots and active oozing (Image 2). The prostate, with visible brachytherapy beads, was seen eroding into the rectal wall (Image 3). Hemostatic spray was successfully deployed to control the bleeding. He ultimately underwent a diverting loop colostomy after a rebleed three weeks later.

Discussion

The incidence of rectoprostatic fistulas after brachytherapy is 0.2-1%, with median time from brachytherapy to fistula formation around 37 months.[3,4] Our case occurred at 20 years post-brachytherapy.

Hemostatic spray has achieved hemostasis without rebleed at 72 hours and 14 days in patients with radiation proctitis.[5,6] However, they did not have a fistula present. Our patient rebled at 21 days.

A meta-analysis of hemostatic spray for lower GIB found high use (monotherapy in 56.9% of cases, combination therapy in 23.4% of cases, rescue therapy in 19.9% of cases) and pooled rebleeding rates (hemostasis in 94.5% of patients, 9.9% at 3 days, 18.6% at 8 days and 17.6% at 30 days).[7]

Hemostatic spray could be a viable temporizing measure as a bridge to more definitive therapy in patients with rectoprostatic fistulas as 10% require surgical intervention.

Conclusions

Rectoprostatic fistulas may occur up to 20 years after prostate brachytherapy.

Although non-variceal upper GIB guidelines recommend hemostatic spray as rescue therapy, certain lesions may not be amenable to standard endoscopic treatments.

Hemostatic spray can be a viable temporizing measure for a bleeding rectoprostatic fistula but will still likely require more definitive surgical therapy.

More research is required to determine which lesions are most amenable to hemostatic spray.

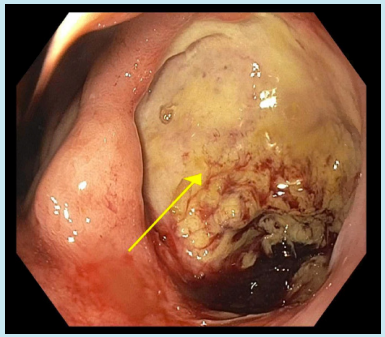

Image 1: solitary rectal ulcer covered in stool and mucous

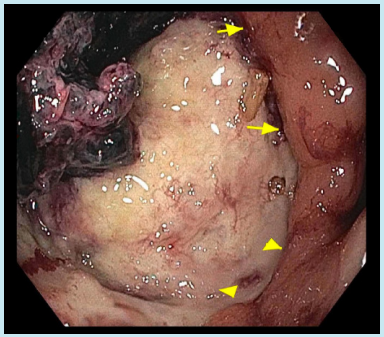

Image 2: rectal ulcer with adherent clot, active oozing

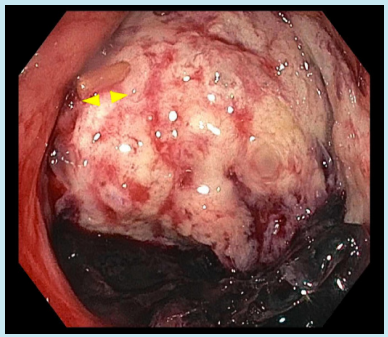

Image 3: prostate brachytherapy beads eroding into rectal wall

References

1. Hong JJ, Park W, Ehrenpreis ED. Review article: current therapeutic options for radiation proctopathy. *Aliment Pharmacol Ther*. Sep 2001;15(9):1253-62.
2. Qadeer MA, Vargo JJ. Approaches to the prevention and management of radiation colitis. *Curr Gastroenterol Rep*. Oct 2008;10(5):507-13.
3. Leong N, Pai HH, Morris WJ, et al. Rectal Ulcers and Rectoprostatic Fistulas after (125)I Low Dose Rate Prostate Brachytherapy. *J Urol*. 06 2016;195(6):1811-6.
4. Wallner K, Sutlief S, Bergsagel C, Merrick GS. Severe rectal complications after prostate brachytherapy. *Radiother Oncol*. Feb 2015;114(2):272-5.
5. Soulellis CA, Carpentier S, Chen YI, Fallone CA, Barkun AN. Lower GI hemorrhage controlled with endoscopically applied TC-325 (with videos). *Gastrointest Endosc*. Mar 2013;77(3):504-7.
6. Chen YI, Barkun A, Nolan S. Hemostatic powder TC-325 in the management of upper and lower gastrointestinal bleeding: a two-year experience at a single institution. *Endoscopy*. Feb 2015;47(2):167-71.
7. Facciorusso A, Bertini M, Bertoni M, et al. Efficacy of hemostatic powders in lower gastrointestinal bleeding: Clinical series and literature review. *Dig Liver Dis*. Oct 2021;53(10):1327-1333.

PennState Health